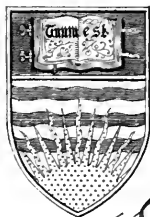


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THE INDUSTRIAL ARMY

Discovered

BY

FAYETTE STRATTON GILES

AUTHOR OF "A CENTURY ONWARD"



NEW YORK

THE BAKER & TAYLOR CO.

FIVE AND SEVEN EAST SIXTEENTH STREET

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PREFACE.

THE modern advances made in physical science have been enormous. Economic and sociological science has lagged. The social equilibrium has been destroyed.

The vital relations of our social organization are strained. The conflict between capital and labor is bitter.

The very principles of our government are but on trial.

Will they endure the strain?

The new phases of industrialism, under actual sociological conditions, tend to minimize the individual, and to throw an undue proportion of the increased wealth into the hands of the few at the expense of the many.

The percentage of hopeless, and often blameless, poverty is increasing.

Moral and physical degradation and crime follow.

The people are firmly demanding that their heritage of natural monopolies and natural

media shall be safely and honestly held in trust, and ably administered, for the equal benefit of all.

We should preserve the principles of justice and freedom, which, according to the intent of its founders, should characterize our representative government. But, with its limited tenure of office, it has evolved a phase of political immorality, and a feebleness of administrative ability, which unfit it to be a just, able, and trusted guardian of the people's common material interests where profits may accrue.

Material and profitable trusts and industries cannot safely be confided to the direct management of our representative form of government in its present phase.

Its creature, the United States militant army, with its life tenure of office, and its special militant and sociological conditions, has shown good administrative capacity, has evolved high personal integrity and honor, and has developed a corporate morality whereby, under normal conditions, it has been generally faithful to the trusts which have been committed to its charge, and it has ably discharged its material duties.

May not the Industrial Army also be a creature of our present civil government, and may we not reasonably hope to be able to say of it

all that we have said of the United States militant army?

To seek for a just and pacific solution of social and economic questions which shall restore the rightful and necessary equilibrium between the physical sciences and economic and sociological conditions; which shall confer upon the individual economic freedom, and equality of opportunity; which shall minimize poverty, want, and crime; which shall make for morality, civilization, and happiness; and which shall preserve the political and personal freedom and equality which our representative institutions were intended to establish, is the object of the writer.

FAYETTE STRATTON GILES.

PARIS, FRANCE, *October*, 1895.



CONTENTS.

CHAPTER I.

| | PAGE |
|----------------------------|------|
| THE DISINHERITED | I |

CHAPTER II.

| | |
|---|---|
| THE STATE : ITS POWERS, DUTIES, AND FUNCTIONS. THE INDIVIDUAL IN RELATION TO THE STATE . | 7 |
|---|---|

CHAPTER III.

| | |
|-------------------------------------|----|
| EDUCATION AND CURRICULUMS | 28 |
|-------------------------------------|----|

CHAPTER IV.

| | |
|---|----|
| PRODUCTION, DISTRIBUTION, AND THE MECHANISM OF EXCHANGE. FIRST AND SECOND PHASES . . . | 52 |
|---|----|

CHAPTER V.

| | |
|---|----|
| PRODUCTION, DISTRIBUTION, AND THE MECHANISM OF EXCHANGE. THIRD PHASE | 67 |
|---|----|

CHAPTER VI.

| | |
|--|----|
| COST OF NUTRITION. PRODUCTIVENESS OF LABOR . | 78 |
|--|----|

CHAPTER VII.

| | PAGE |
|-------------------------------|------|
| THE INDUSTRIAL ARMY | 93 |

Conditions necessary to its success. Plan of organization. Conditions of service. Nature of its obligations, and warrant of the State for requiring their fulfilment. Benefits to be received. Distributing stations. Option of drawing supplies.

CHAPTER VIII.

| | |
|---|-----|
| THE INDUSTRIAL ARMY— <i>Continued</i> | 106 |
|---|-----|

Promotion for merit. Examinations. Officers. Records of aptitudes. Patents. Machinery. Transportation lines. Acquiring of natural monopolies. Mines. Convicts. Contract Asiatic labor.

CHAPTER IX.

| | |
|------------------------------------|-----|
| THE INDUSTRIAL ARMY CITY | 119 |
|------------------------------------|-----|

CHAPTER X.

| | |
|---|-----|
| INDUSTRIAL ARMY RURAL HOMES, FARMS, AND FARM LIFE | 131 |
|---|-----|

CHAPTER XI.

| | |
|--|-----|
| PRELIMINARY STEPS TO THE ORGANIZING OF THE INDUSTRIAL ARMY | 138 |
|--|-----|

CHAPTER XII.

| | |
|--|-----|
| EXCESS OF POPULATION. NATURALIZATION OF FOREIGNERS | 143 |
|--|-----|

CHAPTER XIII.

| | |
|--|------|
| GENERAL CONSIDERATIONS CONCERNING THE INDUS- | PAGE |
| TRIAL ARMY | 148 |

CHAPTER XIV.

| | |
|---|-----|
| MONEY AND BANKING. QUALITIES DESIRABLE IN | |
| MONEY. ITS BEST MATERIAL AND FORM . . . | 159 |

CHAPTER XV.

| | |
|----------------------------|-----|
| AN ENDOWED PRESS | 170 |
|----------------------------|-----|



THE INDUSTRIAL ARMY.

CHAPTER I.

THE DISINHERITED.

WHAT are the conditions which generate and continue the poor, the needy, and the criminal classes of society?

In what manner may the physical and mental conditions of these classes be ameliorated, and a general higher mental and moral culture be evolved?

The end to be achieved concerning these classes is their extinction through modification of initiatory causes. It is evident that actual sociological conditions do not express an achievement of this end.

If present sociological and economic conditions fail to adequately fulfil just requirements, what rational sociological and economic changes will tend to the modification or extinction of the conditions from which these classes are evolved,

and consequently to the extinction of these classes themselves?

In elucidation of these questions, we shall attempt to prove that the vast actual and potential industrial forces of labor, and the resources furnished by the natural media, may be so organized, under just, equitable, and desirable sociological conditions, that the material necessities of each normal individual may be provided for, against full equivalents rendered by him, without infringing the law of just individual freedom, conditioned by the law of right, and without doing violence to our existing civic institutions.

The improvement in general sociological conditions has not kept pace with the enormous modern advances made in the physical sciences, and we shall show that, from the better basic material conditions proposed, may be evolved a superior physical, mental, and moral condition of the individual, and a higher civilization.

Under the head of *The Industrial Army* we shall endeavor to demonstrate in detail, that, without unjust or harmful curtailment of individual liberty or industrial freedom, an equitable and attainable form of annuity, or a coöperative savings fund, may be devised, and maintained by feasible and just individual equivalents

rendered, which shall guarantee and furnish upon demand, to each acquitted member of society, reasonable material comforts during the term of his natural life. This end may be attained by a limited period of coöperative industrialism, to be preceded by a preparatory modification of sociological and economic conditions, in harmony with liberty and justice.

An investigation of these questions will necessitate an inquiry into the functions and powers of the State, and the rights and duties of the individual ; the duties of the social body toward its minors, and toward its poor, its needy, its helpless, and its criminal classes ; modified educational systems ; economic production and distribution, and the mechanism of exchange ; the rights and duties of the State concerning instruments and methods of economic production and distribution, and the ends these instruments and methods should subserve, and whether they do, or do not subserve these ends, in the best manner.

On account of limited space, the study of these problems will, necessarily, be limited to an examination of their most general laws, and the conclusions reached will be based upon first principles and acknowledged premises. Ends to

be striven for should be just, expedient, and attainable.

Means to ends, while being just, should give the maximum result, for the minimum expenditure of force.

Proprietary titles, sanctioned and confirmed by both law and custom, must be respected.

The State may dispossess the holders of such titles only by rendering for them a just equivalent.

The rational method of reform is preventive rather than palliative.

All agencies must be in harmony with the standard of right, justice, and freedom.

The standard of right may be formulated as follows: that is right which is for the best interests of one's self, one's family, and society at large, viewed immediately, proximately, and ultimately.

The standard of freedom may be formulated as follows: man is free to do that which he will, provided he infringe not the equal freedom of all, conditioned by the standard of right. This individual freedom can be conditioned only by such prerogatives as a free people, under a representative form of government, willingly delegates to the State for the good of the social body.

Prerogatives thus delegated to the State must be subject to modification or abrogation by the will of the people.

Beneficence exercised by the State in its corporate capacity should be negative rather than positive; it should not consist in taking away from some citizens parts of the product of their activities and giving these to other citizens, whose activities have not brought them a sufficiency. The citizen in need should be given the necessary opportunity, and then required to suffice for the satisfaction of his own wants, if able.

"If, that the inferior may have benefits which they have not earned, there are taken from the superior, benefits which they have earned, it is manifest that, when this process is carried to the extent of equalizing the positions of the two, there ceases to be any motive to be superior. Long before any such extreme is reached, there must result an increasing discouragement of the industrious, who see the surplus products of their industry carried away; and there must result among these better citizens an intensifying dissatisfaction, tending ever towards revolution. There must be a decline towards an unprosperous state and an unstable state. This policy, if

persistently pursued, leads on to communism and anarchism." *

The supposed benefits of high wages must be modified and conditioned by the real benefits of cheap commodities. The gain in the first may involve a greater loss in the second.

"Articles produced at less cost can be sold at less price, and all workmen, citizens, and consumers benefit to that extent." The gain of high wages may be more than offset by cheap commodities.

Every improvement in machinery or methods, physical or sociological, achieves an economy and dispenses with labor previously necessary.

"Workers displaced by such improved methods become, after a time, available for other kinds of production, thus benefiting the community, including other workers."

All natural monopolies should belong to the social body, and be operated for the benefit of all.

The element of chance, which brings undeserved loss, and unearned increment, should be eliminated where possible. Well-directed efforts should be reasonably certain of reward.

* Herbert Spencer's "Negative and Positive Beneficence," pp. 271, 272.

CHAPTER II.

THE STATE: ITS POWERS, DUTIES, AND FUNCTIONS. THE INDIVIDUAL IN RELATION TO THE STATE.

THE following study of the organization, powers, and functions of the State, and of the individual in relation to the State, is a revision, by the present author, of a chapter on government, published by him in a volume entitled "A Century Onward."

The exact limits of our national and State duties are to provide for national defence; insure personal safety and personal liberty, limited only by equity and justice; to maintain public order; and to promptly administer justice, both civil and criminal, without charge.

Its duties of expediency are to insure, through just sociological conditions, the proper care of its minors by those from whom such care is due; to insure the economic freedom of each normal adult, but only against equitable equivalents by him rendered; to extinguish, as far as may be, through just preventive measures, its helpless,

its needy, and its criminal classes ; to care for the unavoidably needy, infirm, and helpless indigent aged ; and to control for good, as far as may be, by marital restrictions, the physical, mental, moral, and material conditions on which depend the happiness of progeny.

Any further duties which the State may assume should be undertaken with the greatest circumspection.

Such assumption of other functions can be defended only on the ground that, under the present imperfect conditions of society, there may be some things essential to its welfare which can be performed better by the social body at large, and under its supervision, than by private organizations. Even if this assumption be true, past and present experience shows us that, in deciding what these things are, government has more often been wrong than right, and, with but few exceptions, its interference with other matters, and its assumption of prerogatives and functions other than those essential to the best performance of its exact duties, have worked unmixed harm. It follows, therefore, that the rule of the State, outside of its exact duties, should be more advisory than compulsory, and that responsible citizens, though under obligation to fulfil just duties toward the

State and toward self and family, and entitled to receive equitable accruing benefits, should support the good and evil consequences of their own actions, their rewards and penalties being in proportion to merit.

Our basic principle is that the government is for and by the people, not the people for the government. Man should be free to do that which he will, provided he infringe not the equal freedom of all, conditioned by the law of right; and that is right which is for the best interest of one's self, one's family, one's immediate surroundings, and for society and for the world at large, viewed presently, proximately, and ultimately. The law of equal freedom and personal responsibility, conditioned by the law of right, forms one of the most necessary conditions of human happiness.

The laws of expediency, of justice, and of love demand that the State shall always protect, and shall assist, its needy infirm and needy aged, endeavor to enable its helpless classes to help themselves, and, where necessary, care for, rear, and educate its minors, and prepare them in their turn to take their places in the State. Therefore, the State should assume the responsibility of the rearing and education of needy children, and the assistance of its needy, infirm,

and helpless, as well as the care of its criminal classes.

Hence it should recognize and assume the duty which goes with this responsibility,—that of controlling and reducing to a minimum the conditions from which these classes are evolved, and of making all classes self-supporting, so that they may not become public burdens.

Under the Industrial Army *régime* the assisted needy are principally foreigners, who cannot participate in the army benefits. These are divided into different classes :

The unfortunate and worthy poor ;

The shiftless and lazy poor ;

The criminal poor ;

Those temporarily out of work and desiring employment in exchange for a home until paying situations be procured.

Each class is cared for separately and treated according to its merits.

Worthy families may be assisted in their own homes. No one is permitted to suffer from want.

All persons in more than temporary need, or without homes, are taken to the county institutions, where they are required to work, if able, and are taught trades, if they remain long enough. They receive, in exchange, a home,

food, and coupons for clothing and for transportation, but no money. The transportation coupons are for third-class transportation, and enable the laborer to go where his labor is most needed, which information is furnished him free by the government bureau.

All persons desiring to work on these conditions are free to do so.

In these county institutions employers seek for help. These institutions are generally self-supporting, and no one is refused work. The sick and lame are well cared for in the hospitals.

In so far as the State has assumed the responsibility of the care of its unfortunate of certain classes, it has also assumed control of the conditions which continue these classes, and taken steps to eliminate them.

Genealogical records are kept.

Each person, native or foreign, must have papers showing who he is and where he belongs.

Its contract marriage system requires parties desiring to marry to produce certificates that they are in good mental and physical health, and that neither has ever been convicted of a criminal offence; also certificates that they are not assisted persons, and that they have material means or resources sufficient to care for possible progeny. For the care of progeny settlements

may be required when this is deemed advisable.

The State also provides for the rearing and education of orphaned or needy children in its homes, and for the rearing of children on which settlements have been made.

For \$200 cash paid, the State will issue to a couple, on the day of their marriage, a fully-paid insurance policy, agreeing, if the parties should wish it, to rear in its homes with parental care and kindness, and educate in its primary and secondary schools, and further give a three years' course in its professional and technical schools, to any children of this couple that may be orphaned of one or both parents. The student is free to obtain a diploma in any of the liberal professions, or to acquire any of the mechanical trades.

This insurance, or the Industrial Army Orphan Insurance, is obligatory. (See chapter IX.)

For \$500 the State will insure in the same manner all the children a couple may have, whether orphaned or not, if they become needy, but the parents must care for them if able. This last insurance must be taken, and if necessary other settlements must be made, by couples desiring to marry but who cannot satisfy the require-

ments of the law in regard to material resources. It will concern mostly foreigners who have not I. A. rights.

Each able-bodied male citizen, on becoming of age, is required to acquit an insurance fund by equivalent personal work in the Industrial Army, or by money payment, which shall provide the insured, upon demand, with the material necessities of life, and thus guarantee to the State that he shall not become a public burden. The taking of this insurance is optional on the part of women.

Free public and compulsory education by the nation, and by the State, is one of the things which has proved to be efficient and for the benefit of the country. But even in this we recognize the principle of individual freedom by not making it obligatory for children to attend the public schools, if their parents prefer that they study at home, and if they pass favorably the annual public examinations of the school boards.

Fixed public institutions are not perfect, and, if unchangeable and compulsory, may arrest advance to higher types.

The greatest progress has been made on lines outside of those of rigid institutions.

Recognizing this, we leave all possible liberty

to individual action, coupled with personal responsibility for the same, and requiring the individual to fulfil such equitable conditions as shall provide for his own maintenance, and insure the well-being of progeny.

In the same work the present author drew the following sketch of what our representative government may be in the coming century.

We have limited, but precise, national, State, and municipal constitutions.

They are but little more than the necessary laws, clearly defining their organization, extent of power, and relation each to the other.

The English government rules without being limited by a written, fixed constitution.

The general United States government, with a few exceptions, has not undergone radical changes in its powers and organization within the past century, but its methods have changed for the better, and there is unity and harmony in its legislation. This has wrought wonderful good to the country.

Primaries have been superseded by a method which permits each citizen to make his own nominations.

Registration must be accomplished at least two weeks before the day of voting, and registered names, with addresses in full, must be

bulletined for two weeks before, at the future places of election, and be subject to challenge by citizens, and to an obligatory certificate of their validity from the police of the precinct.

Every voter is required to make, at the time and place of registration, a written nomination (by filling out a prepared blank) of a candidate for each office which it is the purpose of the election to fill. Nomination ballots containing names must not be furnished. Nominations must be made, and voting must be done, in secret.

The old Australian system, with slight modifications, is employed for both.

A proposed candidate must be eligible for the office.

He must receive a number of nominating votes that shall be not less than two per cent. of the total number of registered voters for that election.

He then becomes a legal candidate for the office.

The names of all persons so nominated, AND NO OTHERS, are placed upon election ballots, opposite the total number of nominating votes received by each. At the election the voter is then free to make and vote for his own choice among the nominated candidates for

office. This system has abolished the evils of the old primaries, and secured good nominations. It is followed in all elections of whatever nature, municipal, State, and national.

The government consists of four branches :

The National Council, or Advisory Department.

The Legislative Department.

The Judiciary Department, which construes and interprets the laws.

The Executive Department.

Among the new cabinet departments which have been created, the most important are the Department of Public Instruction, the Industrial Army, the Department of Railways and Transportation, the Department of Commerce, and the Department of Fine Arts.

The President is elected for seven years, and is not reëligible.

The manner of his election has not changed.

On retiring, he receives a pension of \$10,000 per annum.

Among his duties is that of informing Congress of the state of the Union, and presenting such bills for consideration as he may deem to be for the national interests, thus securing harmony and unity in legislation.

With the advice and coöperation of his cabi-

net, and after elaboration by the National Council, he presents projects of laws direct to the Legislative Department. He may present bills direct without the intervention of the cabinet and the National Council. The Legislative Department may amend, pass, or refuse to pass any of these projects or bills. He has the veto power.

Government bills have precedence over others. The cabinet officer whose special department any bill concerns becomes a member of the National Council, and of the legislative bodies, for its elaboration and consideration.

Members of the Senate must be past forty years of age. They are elected for seven years, one seventh renewable each year. They are not reëligible. They are elected directly by the people, by popular vote, and in proportion to population. A number of Senators, equal to one tenth of the whole number elected by the States are elected from the country at large by the two legislative bodies in united session.

Members of the Legislature are elected for four years, one fourth renewable each year. They may be reëlected. The number of representatives in proportion to the population has been reduced, which keeps the body smaller and more efficient.

The National Council is of recent creation. Its functions are advisory, not administrative. Its duties are to prepare projects of laws for the legislative bodies on request of the President, or President and cabinet ; and on request of either of the legislative bodies. Also to prepare bills for the modification of laws, and for the repeal of obsolete or conflicting laws ; to prepare bills concerning the relations of the general government towards its States and towards the United Republics of Civilized Nations ;* to prepare bills for the different States to further uniform national legislation and uniform legislation in all the States on matters of national importance. A member of the State Council becomes a member of each of the legislative bodies for the consideration of any bill prepared by the Council. General State bills, concerning uniform State laws, may be prepared and presented to the different States for action :

First, by the State Council without request, but to be approved by the President when prepared ;

Second, by the State Council, on request of the President or of both legislative bodies, which

* This supposes a federation of republics, comprising all civilized nations.

last form is also necessary for bills concerning the United Republics ;

Third, on the request of the Governor of any State, the request to be approved by the President.

The States may ratify, or refuse to ratify, such bills.

The National Council is composed of one member from each State, appointed by the Governor of the State. The members hold office for seven years, one seventh renewable each year.

The President, on coming into office, appoints a number equal to one half of the whole number of them, to hold office for seven years, or during the Presidential term. The appointments are made without distinction of party, and the appointees must be chosen from those holding scientific professorships in United States and State universities, all the sciences, natural, physical, political, and economical, moral, social, and philosophical, being equally represented. They must include a professor of agriculture, one officer from the militant army, one from the industrial army, and one from the navy. A cabinet officer becomes a member of the National Council, and of the legislative bodies for the consideration of bills concerning his special department.

Bills may be presented direct to the legislative bodies by any member thereof, without intervention of the State Council.

Through the labors of the National and State councils, the National and State laws have been revised and codified, and obsolete, vague, and conflicting statutes have been abrogated, until one small volume suffices to contain all of the United States laws, and one small volume the laws of a State. The general laws of all the States have been made harmonious as far as possible. The jury system has been revised. A jury is now composed of seven men only, and a majority of their votes make the verdict. All this has greatly simplified the administration of justice. These measures have rendered it possible to make the functions of the law quick and sure.

It is now a recognized duty of the State to administer justice without cost to the litigants, both in civil and in criminal cases. It is administered promptly, with no further delay than fairness requires. For a long time citizens burdened with taxes imposed by the State were left by the State to bear their civil wrongs in silence, or to risk ruin in trying to get them righted, notwithstanding the great sums in taxes which they paid to the State for protection.

The State would not go to the trouble or expense of defending them. A citizen might be defrauded of an estate, the poor woman of her furniture or her little home, but the State turned a deaf ear to their complaints. They had to bear their losses, or run the risk of further and possibly greater losses, often beyond their means, in carrying on an expensive and unequal suit, and in possible appeals. The rich and the poor now stand equal in the courts of law and justice, for justice is free and the State promptly protects.

Since justice is simple, prompt, and certain, and can be had without cost, the number of trespasses has enormously diminished.

The great majority of civil offences were consequent upon a costly, slow, and inefficient administration of justice.

The militant army insures protection from foes without and within. Through the medium of the Industrial Army, and the socialization of natural monopolies, all are provided for against want,—their own personal efforts properly directed sufficing to accomplish this result,—and society is relieved from the burden of dependent classes.

Further than the maintaining of these two organizations, the functions of our government

still are limited as nearly as possible to the administration of prompt and free justice; to protecting the interests of the future generation by imposing suitable restrictions on marriage; to providing public education; to caring for minors; and to doing such few things as manifestly devolve upon the public, and which private enterprise presumably would not accomplish as well. The conferring of personal freedom and responsibility, giving the people full liberty of action, limited only by the like liberty of all, conditioned by equity and justice, and making the individual personally responsible for his actions, are its aims. This limits the necessities of legislation. But few bills of a material or private nature are passed, and most of these are thoroughly considered by the most brilliant and capable men of the country in the National and State councils, before being submitted to the legislative bodies. Even with these safeguards, some legislative enactments are found to be injurious.

State governments are organized on about the same lines as those of the general government which we have examined. They have their State Council, and Legislative, Judiciary, and Executive departments, formed and acting in about the same manner as those of the

general government. The governors are elected by the people of the State at large for a term of five years, are not reëligible, and receive a limited pension.

In a representative government, the representatives, as a rule, are neither better nor worse than the majority of the people by whom they are elected. A low moral and social condition of the people generally means morally and intellectually low and bad representatives, and consequent bad government.

Good government requires that the moral and social condition and the education of the masses of the people be raised to a high standard. Then the people must have an equitable form of representative government to act under, reserving to themselves individual freedom, yet making themselves personally responsible for the consequences of their own acts.

The making of the cities free and responsible for their own good or bad government, was the beginning of the evolution of a better city government, as from freedom conditioned by right and justice, and personal responsibility, have always been evolved the highest social conditions of civilized people.

The abolition of the primaries, bulletined registration in advance, and the requirement

that the people should individually nominate their own candidates for office at registration was the next great reform.

The models of city governments and the relations of the cities to the State are about the same as those of State governments and the relations of the States to the United States. There is a general law in each of the States, granting to cities of one hundred thousand population and over, covering a given restricted territory in proportion to population, freedom and the right to manage their own affairs, with about the same limitations of rights and jurisdiction toward the States, as those of the States toward the United States government. Outlying districts possessing the requisite population may become annexed. Cities may be taxed for State roads and all public works of State interest. These taxes must be within the limits of justice.

Suffrage is restricted by reasonable property and educational qualifications.

The municipal government consists of four branches :

The Advisory Department.

The Legislative Department.

The Judiciary Department.

The Executive Department.

The Legislative Department consists of two

bodies. One, the Board of Aldermen, is elected from and represents the different wards; its members are elected for three years, one third renewable each year.

The second body, or the City Senate, consists of a limited number of men, elected from the city at large, chosen from its best citizens, and holding office for five years, one fifth renewable each year. No person under forty years of age may be a member of the City Senate.

The Executive Department consists of the Mayor, elected for five years, by and from the city at large. He is not reëligible. The heads of the various city departments are appointed by the Mayor, and form his cabinet. They are responsible to the Mayor, and the Mayor to the people. This fixes the responsibility for good government.

The Advisory Department consists of the City Council. It is composed after the manner of the United States State Council, with similar duties. Its functions are advisory, not legislative or judicial. It is composed of twenty-five members. No person under forty years of age may be a member of the City Council. The elected members hold office for five years; one fifth are renewable each year. Fifteen members are elected from the city at large by the Board

of Aldermen and City Senate in joint session. Ten are appointed by the Mayor on his coming into office, and they hold office during his term.

Each one appointed by the Mayor must have a university degree and be a doctor in his specialty. They are to be so chosen as to represent equitably medicine, law, philosophy, and all the sciences, natural, physical, social, moral, and economic. They are usually chosen without regard to party.

The functions of the City Council are advisory, not legislative, and are the preparing of bills for the action of the city legislative departments, on request of the Mayor or either of the two legislative bodies. It may also prepare and present certain classes of bills direct to the legislative department without request, on approval by the Mayor.

The Mayor, with collaboration of the City Council, must present such bills to the legislative department as he may consider in the interest of the city. The above classes of bills have precedence over others. The legislative department may modify, pass, or reject such bills, and frame and pass bills of its own.

The Mayor has the veto power.

Certain classes of bills and all demands for franchises must be submitted to the City Council

for proper study and elaboration, before being acted upon by the legislative bodies.

When a bill especially concerns any one city department, the chief of that department becomes a member of the City Council for its elaboration, and of the legislative bodies for the consideration of any such bill prepared by the council.

The Judiciary Department construes and interprets the laws and acts of the other departments.

It must be remembered that no form of government, either national or municipal, can secure good administration, unless its representatives be of high moral character and great intellectual attainments.

CHAPTER III.

EDUCATION AND CURRICULUMS.

THE following chapter on the above subjects is a revision, by the present author, of a chapter published by him in a volume entitled "A Century Onward":

Much of the misery under existing social conditions is but the consequence of oppression and of errors and prejudices which cause men to live out of harmony with the natural laws of their existence and environment, and with the universal laws of right and justice, which should govern all existence. This misery cannot be eliminated by subtle or complicated agencies, but only by conforming to the simple, natural laws essential to happiness, which govern all life and all matter, animate and inanimate.

Science teaches us that, mentally and physically, we are but evolved beings,—the result of selection, hereditary influence, and environment. It teaches us that the limits of the possibilities of the individual are fixed by his environment and capacity.

The more powerful hereditary combinations evolve, from time to time, greater minds, more powerful in will and expedient, which throw off the chains of error and prejudice, and to a larger extent dominate environment, discover the natural laws that control us and all matter, search out the right, and lead their fellow-men to higher planes of happiness. Such men are our great scientists and philosophers.

The right kind of education must include a knowledge of the unchangeable laws of our environment, a knowledge of the laws that govern the universe and ourselves, in order that we may keep in harmony with them. The degree of happiness to which we may attain depends upon the degree of harmony with the great natural laws of the universe and of all existence at which we may have arrived.

Therefore, education should fit a man for his environment. It should unveil to him the world in which he must live, and show him the inexorable chain of laws which governs and fixes his relations to it. It should show him the continuous, interdependent, and unfailing workings of the laws of nature, and their causes and effects, and that he himself is but a result of them and is subject to them. These will show him the invariable conditions of penalty and reward which

nature imposes and gives, and which concern him as well as all other life. It should better enable him to discover what achievements, in the nature of things, are reasonably possible and what are impossible, and, therefore, what ideals may be consistently cherished.

Neither theology, history, literature, nor art, nor the dead languages, nor Christian evidence, combined by themselves, can avail much toward this. Only science can do it; not science as formerly taught, if at all, in most of the old colleges, a mere mass of facts, more or less detached, calculated to render vague the idea of necessary relations, and failing to show the necessary continuity of all things; but science, as a whole, yet with different divisions, taught as a mass of interdependent relations, as an unbroken chain of sequences, of which no link can be omitted or weakened, showing the unfailing continuity, the complexity, and the connection of all phenomena.

The complex divisions of science, like biology and geology, if viewed detached, tend in themselves to render vague the idea of necessary relation. But, if viewed as they should be, as a part of the whole, in connection with astronomy, physics, chemistry, physiology, and psychology, they will lead to different and more correct conclusions, and, consequently, will render of more

value judgments formed upon involved questions.

In the past century the errors and failures in schemes of charity and education, the false interpretation of history, and the mistakes in legislation and sociological methods were due, among other causes, to failure in understanding the laws of mind.

The motives and workings of individuals and of communities cannot be understood without a knowledge of psychology. Questions of a sociological nature demand this as a condition of intelligent action. An adequate knowledge of psychology cannot be had without a knowledge of the brain functions. This again is based on a knowledge of biology and physiology, and these in turn are related to chemistry and physics, and chemistry and physics are related to astronomy and geology.

No one whose opinion is of value now disputes these relations, but most of our colleges and universities of the nineteenth century have, until recently, wilfully failed to see the necessity of them.

These are some of the essential things which should be taught, and which every man ought to know, whatever else he may know. They concern and influence the every-day interests of

all. Without them it is impossible for men to formulate a right standard of conduct and living, and it is more than probable, even with irreproachable intentions, that their conduct will be at variance with the nature of things, and at war with right and justice. These are things a college should teach, no matter what else it may offer.

Primary and secondary schools and universities should be founded upon these principles. Only during the last quarter of a century have these institutions been so organized as to properly aid in useful scientific education and research.

We have had for centuries great universities, rich and powerful institutions of learning, aided and controlled by churches still more rich and powerful, which were supposed to combine the learning of the land, the churches especially claiming to be the depositories of all knowledge, as well as of the only standards of truth and right, and declaring themselves infallible and the sole competent leaders and teachers of men.

These institutions were founded on a belief in a special creation—on a belief that the human mind is not the result of natural laws, and is not subject to them. They opposed scientific research, and bitterly antagonized scientific ad-

vance, since it disproved the special-creation doctrine. A supernatural force was outside of and controlled the natural. Research which conflicted with the supernatural theory was not encouraged.

But both the churches and the universities they controlled failed to discover and show to men these great and continuous chains of scientific truths and facts, embodying the laws of their being and environment, which should fit them to lead broader and happier lives. They failed to recognize truth, and had no criterion of it, and were consequently incompetent leaders.

These truths and facts have been unveiled by science and philosophy.

The history of these church-controlled university institutions up to recent years shows their line of conduct to have been mostly one in opposition to the higher human progress, rather than in aid of it.

Matters of the greatest relative value were either completely ignored or treated in an unworthy manner. The time of the students was occupied in the study of dead languages, which had perished through uselessness ; in the study of theological superstitions ; of history in the nature of personal gossip, and often untrue ; of ancient literature of a mythological character

and questionable morality; and in the study of speculative philosophies having little or no value as guides in our present civilization.

But there were thoughtful men, of broader minds, who saw the folly of spending time on matters so frivolous, of so little relative importance, and all leading to the continued slavery of men.

These men refused to follow the teachings of the old schools and institutions, and, disregarding the unpleasant consequences to themselves, searched out the natural laws of cause and effect, of right and happiness, and became the leaders of men in the new life.

Such men were John Stuart Mill, Tyndall, Darwin, Huxley, Herbert Spencer, and a long list of others.

With a more noble conception of the ideal, these men laid the foundations of our present social, educational, scientific, and philosophical systems, and rendered possible the greater progress in human happiness which we see around us.

These men for the most part did not receive their instruction in the great educational and theological institutions, and the opposition to the scientific truths which were discovered by these men, and to the consequent greater human welfare which they made possible, came prin-

cipally from men trained in these educational and theological institutions.

The great advance in the physical and social sciences, and the consequent metamorphoses in education, have mostly taken place in the last half century.

The knowledge of the natural history of man acquired through the aid of ethnology, philology, psychology, and other branches of science, has proved him to be but an evolved animal, both mentally and physically. It has proved inaccurate and worthless all former conceptions of him, and rendered worthless as standards or guides almost everything that has been written. The volumes of the pre-evolution age, no matter how ably written, cannot help one as standards, for their premises are false.

The coming century will be a busy one for our great thinkers and workers ; for the great discoveries made in the physical, moral, and mental sciences, especially in psychology, have made it necessary that ethics and history, as well as nearly all literature, should be re-written. The past has been broken from. Its great ones are no longer our teachers and leaders in knowledge. The old standards of right, equity, justice, and honor will be modified and supplemented by the broader ones of a more advanced civilization.

In laying out a curriculum which shall constitute a substructure of general basic instruction, and which shall be free and obligatory for all, we must consider first what part of the lives of the masses may be consistently devoted to acquiring the fundamental principles of the science of right living, coupled with the training of the intellect, the will, and the emotions.

The substructure of a general education must be broad and deep and firm enough to support the life edifice in all its potential beauty and grandeur. Scientific facts should be its materials. Dogmas and prejudices should form no part of its foundation.

In an industrial society, with no privileged classes to sustain, the time given to acquiring education may be equal to the time so given in a militant society, plus the time occupied in military training and service, plus the time occupied in providing for the material wants and expenditures of the army and for its attendant destruction and waste, and in providing for the material expenditures of luxurious titled classes and extravagant permanent rulers, who rule by divine right and by the grace of God.

Or, the time spent in most militant societies in military service and in preparation for it may be devoted to acquiring useful education, and to

physical and psychological training, and the time and labor devoted to financially sustaining militant activities, and their attending wastes, may, through organized effort, be successfully expended in providing for the future material wants of all, thus adding to the number of educational years, and shortening the years of necessary toil.

Under proper organization these added years and resources, if devoted to personal development and to the acquiring of material benefits, should give to an industrial society preponderating advantage over a militant society, in general increased breadth of culture, in material comforts, and in increased happiness.

In militant countries, requiring from three to four years' service, free and compulsory education, if it exist at all, is rarely extended beyond the age of eleven or twelve years.

In view of this, under our own sociological conditions, actual and proposed, we may profitably extend the obligatory period to the sixteenth or seventeenth year, with optional further university and technical-school privileges.

The primary and secondary school curriculums will therefore be arranged with this view.

These curriculums will be based on scientific principles, giving mental training, on which spe-

cial aptitudes may be optionally and successfully further developed in all directions. For the making of a suitable choice of studies a measure of values is of the first requisite.

They must tend to the instructing and the developing of the faculties, mental, physical, and moral, in the necessary activities which go to make up successful human life in its widest sense, and consequently to the right ruling of conduct under all circumstances.

These activities have been classed by Herbert Spencer in the following order, and they may serve as a criterion of values in the choice of studies to form the curriculums :

1. Those activities which directly minister to self-preservation ;
2. Those activities which, by securing the necessities of life, indirectly minister to self-preservation ;
3. Those activities which have for their end the rearing and discipline of offspring ;
4. Those activities which are involved in the maintenance of proper social and political relations ;
5. Those miscellaneous activities which make up the leisure part of life, devoted to the gratification of the tastes and feelings.*

* See Herbert Spencer's " Education," p. 32.

Given the time to be devoted to acquiring an education, given the end to be achieved, and given the foregoing criterion of values, we must ascertain what branches of knowledge are of most real worth, and what will be the relative values of the branches composing a chosen curriculum.

All knowledge may be of some importance, but we must ascertain if the degree of its importance, as a means to an end, justifies the expenditure of time needed to acquire it, and if there are not other things, of more importance to ultimate results, to which the limited time might be better devoted. There must be a proportion between the required labor and probable benefits.

The question is, not whether a certain knowledge is of worth, but what is its relative worth? Of what comparative use is it? To what extent does it beneficially aid the activities in preserving from pain and in securing happiness?

Knowledge of intrinsic worth must take the precedence of knowledge of extrinsic or conventional worth. There will be no time to acquire knowledge for extrinsic effect.

Again, all acquirements have two values—value as knowledge and value as discipline. If these two values may be acquired by a single

process, a great saving of time and effort will be accomplished.

We shall see that scientific studies combine both of these values, in the greatest degree and the most concentrated form, if we keep before us the ends to be achieved.

In view of the ends to be achieved, and the principles and criterion of value concerning these ends, as set forth in this chapter, the Department of Public Instruction has adopted a curriculum for its free primary and secondary schools which it deems best adapted to their purposes. It is as follows :

Reading and writing ;

Elements of English literature ;

The English language, and two optional modern languages ;

For each pupil, the first elements only of the literature of the two countries whose languages he has chosen to learn, to be studied in the original—as little time to be given to this as will suffice to form a guide for future work in the same line if desired ;

Mathematics—simple, and, for the secondary schools, the higher ;

Geography—physical and political ;

Modern history, and as much of ancient history as bears fair evidence of accuracy, and as is

of any national concern, both branches being viewed from the standpoint of their values as economic and sociological studies, and for the value of the lessons they teach ;

Ethics—moral and ethical instruction, teaching man his duty to himself and to his fellow man, and the reasons therefor, both being considered under their different aspects, physical, psychological, and sociological ;

Civic instruction and sociology—teaching the organization of our own government, with its full workings, and the rights, duties, and obligations of citizens concerning themselves, the social body, and the State ;

The physical sciences and mathematics, with actual laboratory demonstrations of their laws, great prominence being given to the course in physics ;

Political economy, and especially the laws of trade and finance ;

Logic ; applied agricultural chemistry ; book-keeping ;

For boys, instruction in the manual use of the tools and machinery employed in the principal trades ;

For girls, instruction in needlework, in tailoring, and in most of the lighter industrial occupations for which they are specially adapted ;

The chemistry and art of cooking ;

Athletics, for both sexes, as much time being devoted to them as may be required to insure an evenly balanced mental and physical development ;

For both sexes the elements of all other branches of science, in the following order : Cosmography, geology, chemistry, biology, botany, zoölogy, anthropology, psychology, physiology, and hygiene, with actual dissecting, pedagogics, and other branches in their order ;

The practical application of these sciences to the laws of complete living and race improvement, and to the industrial, agricultural, manual, and the æsthetic arts ;

A course of synthetic philosophy, showing the necessary and inseparable continuity of all the sciences, and the invariable laws governing all matter, animate and inanimate, and man's relation to these laws ;

The elements of drawing, modelling, and music.

The most time will be given to matters of the most importance, and the least time to matters of the least importance.

The schools are divided into two grades, primary and secondary, and both are free and obligatory. The student is graduated from the primary department at the age of eleven or

twelve years, and from the secondary department at the age of sixteen or seventeen years. The curriculum is nearly the same in each grade. The primary department teaches the simpler elements of the sciences. The secondary schools teach them in a more involved degree.

Translations of all that is useful in Greek and Latin are read by the student, relieving him of the necessity of learning the dead languages.

The further pursuit of the classics is reserved for the universities.

The minor value of the classics is not ignored ; but our first duty is to teach the more useful knowledge, and thus give to our youths the best possible preparation for the actual world in which they must live. This is all the State enforces. Full scope is given in our universities, to whomsoever will, for the study of the classics and for the pursuit of higher knowledge. The instruction and training we give our pupils in our primary and secondary schools enables them, when they enter a university, to extend their researches in every field much further than it was possible for them to do under the old conditions.

These primary and secondary schools cover the ground of, and go further than, the old colleges, and further than the old university move-

ment, which, though good for their time, these schools have now replaced.

The youngest pupil can understand and profit by this broader course of teaching and training.

“A child seeks information about matters of physical science as soon as it begins to talk. The first thing it wants is an object-lesson of some sort, and, as soon as it is fit for systematic instruction of any kind, it is fit for a modicum of science. In olden times people used to talk of the difficulty of teaching children such matters, and in the same breath insisted upon their learning their catechism, which contained propositions much harder to comprehend than anything in this educational course.”*

The text-books of the sciences for beginners are simplified and brought down to the understanding of a child of six or seven years of age for the primary department, and are more complete for pupils of the secondary department.

With the exception of manual training, the studies are the same for both sexes, but the schools are separate. The sciences are taught with actual demonstrations—in the field, in the forest, in the mountains, and in the laboratories.

In the primary department of scientific in-

* Thos. Huxley.

struction, the kindergarten system is employed for beginners.

The children begin at once in the A-B-C's of scientific knowledge. Pursuing these, they gain, in an intelligent and practical way, the usual elements of a primary education, the elements of mathematics, the science and art of numbers, reading, spelling, grammar, geography, etc.

They learn to be logical, and to know from experience that an opinion without knowledge, or one founded on false premises, is worthless. They learn to ask serious and logical questions. Mental activity and energy and quick perception are necessarily developed. Habits of thinking, weighing, and reasoning are formed. Memory becomes active, and imagination vivid.

Their minds will receive a higher discipline and a vastly broader development in these scientific studies under this system than it is possible for them to acquire from study of the dead languages and classics, latterly so prominent under the old church and college system. In the study of nature they learn that nature's law is everywhere, and is inexorable.

They acquire the idea of the inter-relation of localities, and the exchangeability of their products.

They discover the great cosmopolitan unity

and brotherhood of the human race, and its community of independent and sympathetic interests in all quarters of the earth. From this they learn their duty to their fellow-men, and the reasons therefor; and this develops in them a comprehension of, and a love for, the laws of justice, and inspires love towards all living things. It teaches them the formula of right and of truth.

The elements of all these are acquired in the primary department, so that at the age of eleven or twelve, or at the entrance to the secondary department, the pupils have already a large fund of genuine knowledge and mental power and training, and are prepared to make rapid strides in acquiring more complete knowledge, and towards a higher mental, moral, and physical development and culture. They now seek to analyze the laws of nature. They try to search out the essential elements of all things, and to discover their necessary relations. They strive to place themselves in harmony with all natural laws, and thus learn to know better what is possible and what impossible. From this education is evolved a correct knowledge of, and sympathy with, the beautiful, the harmonious, and the true in humanity, in nature, and in art.

Education, except in the universities, is entirely free and compulsory, but study in public schools is not compulsory. Home education, with a public-school examination, is accepted. If educated at home, children must, at the end of each school term, pass a public examination equal and similar to the examination which those educated in the schools are required to pass. If a child fail in this examination, he must enter the public schools. This system leaves parents free, when successful in results, to employ their own methods, and to teach whatsoever else they may wish at home.

The children of the rich and of the poor should have equal facilities of preparation for assuming the duties and for enjoying the pleasures of life.

In furtherance of this end, there are State institutions or home schools for orphans; for those whose parents are competent to give them proper home care, but whose occupations prevent their doing so; for the abandoned, and for the poor children.

Those who are able to pay may do so. These homes are small, accommodating only as many pupils as can be given home comforts and personal attention, and are homes in every sense. Here the unfortunate and all those in

need of homes are reared; here they receive the primary and secondary education.

These are not charitable institutions; society but fulfils its obligations to those it permits to be born.

A child reared and educated at public expense is humiliated neither by a sense of obligation to others, nor by the wearing of any badge of charity.

The expense of these schools is very small for those who pay; to others they are free.

Each State has free technical schools; a free Industrial Army academy, and a State university.

In the first named one may fully acquire any of the mechanical trades.

In the second a course of two years' work is devoted to special preparation for the requirements of the Industrial Army service.

A diploma from this institution entitles one to enter the service of the State, and to be placed upon the lists for the commission of an officer in the Industrial Army after the regular industrial service is completed.

In the third one may study as a specialty any of the learned professions, and pursue at will all branches of knowledge.

A diploma of graduation from the primary and secondary schools is required as a condition of

entering any of the three above-mentioned institutions.

There is a United States militant military academy and a United States university. The latter is managed by the Secretary of Public Instruction and the Educational Council. This council (see chapter on government) is composed of members representing all the chairs of a university.

There should be no gaps in work during the educational period of life—only reasonable vacations.

Work should follow consecutively from primary to secondary school, and thence to the technical school, or to the Industrial Army academy, or to the university. Then a year's travel in foreign lands may profitably intervene between the finishing of the educational period and the entering of the Industrial Army service.

Up to this point the student has been made acquainted with a wide range of scientific and philosophical facts, and he is now prepared for a more extended life research along right lines in every direction.

He realizes that he is as yet only on the threshold of all knowledge, and that life itself is a school. The great library of experience lies

before him. The books of nature are at hand, and he begins to study.

The curriculum of the primary and the secondary schools is extensive, but there is time for the students to do it justice, and generally they have accomplished the whole course at from sixteen to seventeen years of age.

The programme is not longer or more difficult than that which was followed in the old schools of a century ago ; only it is different. No time is wasted on matters which are not of high value here. Under the old system much of the time and energies of the pupils was consumed in the study of religious and mythological superstitions, and in religious training ; much more time was taken up in the study of classics and of dead languages that had long since perished from unfitness for use.

But little preparation was given the pupils for the actual world in which they had to live.

By many the old college education was considered an actual detriment to those intending to lead an active business life.

Now we teach the sciences and scientific truths, wherever they lead, and that which concerns the world in which men must live, and show them their relations to it. We prepare

men for the real activities of the life in which they must engage.

We teach the laws of right and wrong, of equity and justice, and of love and kindness toward all. In these primary and secondary schools there is no time for dogmas or superstitions, or for the dead past, further than for the lessons it teaches.

CHAPTER IV.

PRODUCTION, DISTRIBUTION, AND THE MECHANISM OF EXCHANGE. FIRST AND SECOND PHASES.

WE shall speak of three phases of production and distribution which have characterized the last half century.

In the first phase, a half century ago, but little improved machinery was employed, and there was but limited adapted power. Long hours of wearisome hand-labor of the family unit were almost the only means of providing for the material necessities of its members, but generally the satisfaction of these few needs was passably well achieved for the times.

Æsthetics were necessarily of minor importance. Division of labor was rudimentary, production was but slightly specialized, transportation facilities were scant, primitive, slow, and costly, and there was but little advantage in exchanging products outside the limits of the village. Exchanges in the county and State were of but little importance, and those with foreign countries were still more limited.

Its citizens were generally, from force of circumstances, independent of extended social co-operation. Economic distress might prevail in families or townships, while adjoining sections were in the enjoyment of abundance.

The family unit, or the village and its surrounding rural district, was both producer and consumer, and there were but few non-producers. The citizen, as a rule, farmed his own land, and owned his own instruments of production. He was generally his own capitalist and his own workman, and, after learning his trade, became his own master in his own shop. He paid but limited tribute, often none, to the middlemen, or to the mechanism of exchange and distribution.

He lost but little from enforced idleness and from economic and financial disturbances. There was but little circulating medium or money of other than local value. Even this often consisted of promises to pay of a fiat nature. Many exchanges were nothing more than barter.

With longer hours and more severe labor, the citizen produced less than at present, but the distribution of products was relatively more equal and just, and he enjoyed a much larger percentage, and often nearly all, of what he did produce. This, except where the crops failed, was usually sufficient to furnish necessary home-

produced food, modest, unpretentious shelter, and coarse raiment.

Many of the comforts which are considered necessary to-day were luxuries then, and the luxuries which go to furnish the home and provide for the table of the well-to-do laborer of to-day were then unattainable by the wealthy. With constant hard work, an honorable and comfortable material position, considering the times, could be, and generally was, maintained by an average intelligent industry, coupled with economy; but methods of production were such that the totality of commodities produced was usually barely sufficient to supply the necessities of the producer.

They rarely permitted accumulation of any considerable surplus of economic benefits, and of consequent wealth, and left but small field for the exercise of commercial activities.

There were but few large fortunes. Large combinations of capital, the corporation, the trust, and speculation and centralization were unknown.

Strikes and lock-outs were unheard of. There was but little abject poverty. The resources furnished by natural media were available for all, and to these the citizen could add his increment of labor to provide for the satisfaction of his material wants.

He controlled to a large extent the rude conditions essential to his own moderate welfare, and there was equality of opportunity.

Edward Atkinson, in "The Distribution of Products," p. 37, thus speaks of this phase :

"They needed as much per person of the absolute necessities of life fifty or a hundred years since as they do now, but they obtained them only by working twice or thrice as hard.

"They were more independent, less interdependent. There was far less capital, and much more arduous and excessive labor. The conditions of life were more equal, but it was the equality of sordid, continuous, excessive manual labor, aided neither by the factory nor by the railroad; neither by the more modern inventions of the masters of science, nor by the administrative and organizing power of the great capitalists, without whose potential work all modern progress would have been substantially impossible."

The second phase witnessed a revolution in the methods of production, effected by physical science, and a vast mechanism of exchange and distribution became necessary in order to generalize in consumption what is specialized in production.

These conditions demanded rapid and cheap transportation and communication.

Physical science responded with their evolution, through the varied adaptations of the forces of steam, electricity, and chemicals.

The people have generally been willing to accept the truths and benefits of physical science, and physical science has ever been ready to respond to the demands made upon it. But the masses have turned a deaf ear to the truths of economic and sociological science, and unhappiness, poverty, and want reign where joy and plenty have asked to come.

Machinery has superseded hand labor, and the railroad the stage-coach; the firm has superseded the individual, the corporation the firm, and the trust is now superseding corporations.

The barter or exchanges limited to the citizens of a village or county have now become great commercial operations of world-wide extent.

An international standard of values has been evolved, with gold for its material, whose bullion and indicated face value are equal in all the world's great marts.

This gold standard has already been adopted, to the exclusion of silver and other less fit mediums, by all the nations which control in

commercial activities; and it is now superseding with us the paper and silver fiat money, and the barter which served for the local exchanges of our primitive, stage-coach period.

Division and specialization of labor is minute, and it has widely separated the producer and the consumer. The glovemaker seldom or never uses a glove of his own making; the producers of boots and shoes seldom wear their own productions; whipmakers seldom or never use a whip.

No one village, county, or State can now advantageously suffice unto itself. Civilized people have become profitably interdependent. Localities and countries separated by long distances have become, where economic legislation has not prevented, great international coöperative bodies.

These conditions demand the maximum result for the minimum expenditure of force; they demand that production shall take place where conditions for, and processes of, production best serve the interests of the consumer. Consequently it follows that the exchange of commodities should be free and unrestricted. The citizen, as a rule, no longer owns the instruments of production which he uses. He is no longer his own capitalist, or his own master. Most of

that which he produces pays tribute to the middleman, and to the mechanism of exchange and distribution—often to the extent of from fifty to five hundred per cent.

Blameless and helpless, he suffers from crises, economic disturbances, and enforced idleness. Specialization of labor is such that he can no longer, without exchange, provide for all of his own wants, but is dependent upon the mechanism of exchange, which often fails him.

He no longer possesses the resources residing in natural media, to which he may add his increment of labor. He no longer controls the complicated conditions essential to his own welfare.

He has no longer economic freedom or equality of opportunity. The laboring classes are no longer free; yet the production of economic benefits has vastly increased.

The product of a single day's labor of the normal workman, properly directed, now often suffices for a hundredfold his own consumption. He and his fellows produce, not only the necessities, but the limitless luxuries consumed by the vast army of non-producers.

Strikes, lock-outs, and arbitrations have now become necessary methods of settling differences between capital and labor. They have worked both good and injustice.

In "A Century Onward" the present writer thus speaks of them: "Workmen may rightfully be persuaded by employers to work, or by strikers to refrain from work. Capital may employ or refrain from employing, but neither can be legally intimidated or coerced by the other party. The right of labor to organize for its own defence and to employ just and equitable means, is beyond dispute. Its right to form unions for the peaceful and legitimate protection of all its own interests cannot be questioned. Under many circumstances, and within just limitations, this association is not only legitimate, but commendable."

There is also no valid reason why employers should not come together, under the same conditions, in organizations for their mutual benefit and for advancement of their common welfare, the same as there is no valid reason why workmen should not combine for similar purposes. Within their proper sphere, both labor unions, and unions of capital, have accomplished much good. They have given workmen and capital the strength and advantage of association; they have lent to the weak the support of the strong; they have aided in maintaining a liberal scale of wages; in many cases they have exercised a wholesome influence upon the character of labor.

When they are governed by reason and good judgment, when they accord the same respect to the rights of others that they claim is due to their own, they are salutary and beneficial.

As one of the old writers expressed it: "There is neither difference nor distinction between the rights of the employer and the employed. The laborer of to-day may be the employer of to-morrow, but his rights do not change on that account. He is the same individual, with exactly the same rights under the law as before. The man using millions of dollars, in the employment of thousands of persons, has exactly the same rights as the poorest employee on his pay-roll. For a time we have heard much about the rights of capital. Capital has no rights, except the rights which every form of property has under the law. The dollar in the laborer's pocket is equally under the protection of the law with the millions in the safe deposit company's vaults. The right in the one dollar is exactly the same right as the right in the millions. An employer has no rights as an employer, distinct from his rights as a citizen, and the same is true of the employee."

Arbitration is good, if both sides agree to it; otherwise it is not practicable. Compulsory arbitration is impossible.

It would be unjust to both capital and labor. It would imply that workmen have a right to insist upon employment, and that capital has a right to insist upon service. Employers must be free to employ labor on the best terms they can make and when they will, and laborers must be free to work where they can obtain the best rates.

If employers have no right to refuse the services of workmen, then workmen have no right to leave the service of employers. If capital is bound, labor must be bound by the same law, which means slavery for both. This would be the annihilation of industries. Labor must be free; capital must be free; coöperation must be free.

This principle—that arbitration, other than advisory, can be employed only when voluntarily accepted by both parties—is also the principle of international arbitration employed in affairs of state by the “International Confederation” on united republics of civilized nations.

Enormous waste characterizes the second stage of production and distribution. Its economic and sociological mechanism is but imperfectly evolved. Production, disorganized and militant, is preyed upon and conditioned by a complicated and costly, unorganized and mili-

tant mechanism of exchange and distribution.

Large sums are needlessly expended in militant competition, for advertising, for travelling salesmen, for costly palaces and high rent, for useless display, and in falsifications, in showy packages, in needless paralleling of lines of transportation at cost of untold millions, in the excessive multiplying of houses of distribution, and in the needless duplication of plants for production, resulting in failures and vast commercial panics.

It is a system of wasteful chaos, from which order is beginning to be evolved through trusts. This great seething militant, chaotic, uncontrolled, and extravagant mass of middlemen, controlling the mechanism of exchange and distribution, intervenes between the producer and the consumer, and wastes and absorbs an undue proportion of economic products.

The unorganized condition of this mob-like horde, its imperfect ramifications, and its lack of accurate knowledge, render it subject to frequent severe and needless commercial and economic disturbances, which arrest its functions. It seems powerless to discern the causes of these disturbances, or lacks sufficient organization to foresee and prevent them. Through these

crises, it enforces idleness, and thus fails to assist able and willing and famishing workers to produce and exchange the desired goods for lack of which they are perishing. It fails to properly perform the duties it has assumed.

This economic condition is often erroneously termed over-production, but there cannot be a general over-production as long as there remain unsatisfied human wants, felt by individuals who are willing and able to render equivalents in labor for their satisfaction.

The fault lies in the wheel which fails to turn in its place.

During this phase, the system of trusts, the great factory, and the vast distributing store are beginning to be evolved. Large bodies of workmen are frequently unemployed; the displacement of helpless labor is considerable, caused by the arrested functions of the mechanism of exchange, and by the evolution of new methods, with which laborers are unfitted to cope. Many of the displaced fail to be again profitably absorbed in the great industrial mechanism, and want and crime and hopeless perpetuated personal demoralization are the results. The present mechanism of distribution and exchange receives more than the producer in the majority of cases. Witness the case of milk in Orange

County, N. Y., for which the producers at one time received two cents per quart, while the consumer in New York, not sixty miles away by rail, paid ten cents per quart—two cents going for production, and eight cents for distribution. When the consumer paid one hundred dollars for a bicycle, the producer received only about sixty dollars for its production. It costs nearly as much to sell as to produce. Notwithstanding the resulting injustice, and the failures of this second phase of industrial evolution, its methods in the aggregate have given, as compared with those of the first phase, enormous absolute, but not relatively proportionate, increased benefits to a large majority of the social body. But this majority has not received its just share of these benefits.

A minority, on the other hand, have obtained an unjust share of these material benefits, accumulating vast fortunes of a magnitude before unknown. Undreamed-of luxuries and extravagant unearned expenditures have become possible and actual for this minority.

These fortunes, if honestly acquired, have generally (though there are exceptions) been derived from the unearned increments accruing from protection and from the possession of natural monopolies that should belong to the people.

The prosperity of the individual should not be secured at the expense of society.

A small minority have less actual material benefits than they enjoyed during the first phase, and the relative proportionate contingent of those in actual, abject, helpless want is greater than ever before.

The voices of millions of the unfortunates who have not received the share of economic wealth to which their contributions to its increase entitle them, are demanding, in tones which the State should not, and cannot justly ignore, that the evolving phases of sociology and economics shall be so shaped as to give a just proportionate part of all increased industrial welfare to all the contributing people.

In this prodigal, wonderful, and spendthrift phase of economic evolution, the production of commodities has necessarily been enormous (in just organization, enough for all), and there has been a disorganized, fierce, pitiless struggle to the death for their possession, in which every man's heart and hand has been against his brothers. Many have found poverty.

Vast fortunes have been amassed by the few, moderate ones by many, and as much or more of material wealth has been destroyed in failures, in extravagances, in waste necessitated by the want

of organizations, and by militant competitive methods.

Many labor night and day through a long life, their sole business being to so manipulate property as to absorb the wealth produced by the honest labor of others, rendering inadequate or often no equivalents. The industrial immorality of falsifications, deceptions, misrepresentations, extortions, thefts, and bad faith has been evolved by this inconsistent struggle, and this immorality has permeated even to the high council-chambers of the nation, which have abetted the oppression of the many for the benefit of the few.

In this mad, absurd struggle in commercial life, over ninety per cent. of those who start in business fail sometime during its continuation, and the highways of life are crowded with a continuous procession of wretched, suffering, despondent men and women, with bowed forms, who have made the fight and lost.

Bodies distorted by honest toil lack bread. But the future gives hope that their children will be symmetrical and fair, with plenty and peace.



CHAPTER V.

PRODUCTION, DISTRIBUTION, AND THE MECHANISM OF EXCHANGE. THIRD PHASE.

THE third phase is but partially evolved from the second, and we are now witnessing its development.

Its instruments are the trusts, or combinations of corporations, the great factory, and the vast distributing store.

The economic tendencies of the third phase, under present economic and sociological conditions, are to accentuate the good and bad characteristics of the second phase. It increases wealth and increases and accentuates relative poverty.

Its line of progress is characterized by the greater consolidation and unification of methods and instruments of production and distribution, and by the elimination of the unnecessary.

By uniting capital and various smaller enterprises under one general management, it does away with surplus plants, simplifies separate interests and renders them homogeneous, diminishes the number of men required to perform the du-

ties, lessens expense, and cheapens production. It eliminates senseless and destructive competition, and its henceforth useless and costly methods. It eliminates the expenditure of unproductive energy from all its operations, and tends to obtain a maximum result for a minimum expenditure of force. Through a wider control, and its consequently more accurate economic calculations, it is better able to adapt supply to demand, thus tending to avert panics and economic and financial disturbances, and to a degree prevent the want and suffering that would result from them.

Under the present economic and sociological conditions of the masses, the great system of trust consolidation, while still further increasing the productiveness of labor, now tends to pour the increased wealth of economic benefits into the hands of the few, and this to a still greater degree than was the case during the second phase of production.

The masses do not now receive equality of benefits, but their failure to do so is due to their lack of economic freedom and consequent equality of opportunity; it is due to their inability, through inefficient mental, physical, and economic preparation, to successfully demand coöperation and profit-sharing, and to their inability to de-

mand and render equivalents that shall be equally just for capital, direction, and labor, so that each increment to production may receive its proportionate share of benefits.

If trusts become monopolies and oppress the public, it is not the principle of trusts and corporations that is wrong; the evil is due rather to a faulty administration of justice, and to unjust sociological conditions and unjust economic and tariff regulations which suppress the right of free exchange. It is the tariff and other unwise economic regulations which make it possible for the trusts to become monopolies. It is due in part to giving them possession of natural monopolies which rightfully belong to all the people. It is a mistaken policy to attack the concentrating and eliminating principles of trusts, which are just, instead of the tariff and subventions, and other unjust economic and sociological conditions, which are unjust. The present menacing danger of trusts is caused by their possession of natural monopolies, which should be the heritage of all the people, and by the subsidies and special protection accorded them by government at the expense of the people. Great dangers lie in these conditions.

If trusts now pour the wealth of production into the hands of a few individuals, the weakness lies

in the inability of the masses, through want of preparation, to justly demand and receive coöperation with equitable profit-sharing. We may infer that the consolidating and eliminating principles of the great factory, the vast distributing store, and the far-reaching trust are right, that they are organizations of a higher order, and, as such, are beneficial to society.

The completion of a great factory, the establishing of a vast distributing store, or the operations of a great trust cause the closing, or prevent the establishing, of hundreds of smaller concerns. Merchants and small producers who can no longer successfully compete are forced to abandon their own small establishments and seek employment in factories and in great wholesale and retail establishments, or turn to other occupations.

This is a displacement of labor from less productive to more productive occupations, due to the evolving of new and better methods, and in itself is beneficial to society.

The railway thus displaced those engaged in stage-coaching and its accessories. The sewing-machine thus displaced the sewing woman. Better methods which displace labor employed by poorer systems tend to work temporary hardships on the displaced, if labor be penniless; but, if labor has economic freedom, it can, with slight

hardship to itself, be absorbed by the better and more profitable methods, and in occupations more useful to society.

These occupations may be made coöperative and profit-sharing without losing the advantages of the trust principle of elimination of the needless.

Large bodies of workmen are concentrated in great factories and industrial concerns, of which they own no part, and in which they can no longer control the conditions essential to their own welfare. These are unjust industrial conditions, resulting from a disturbed equilibrium caused by the retarded sociological and economic evolution of the masses, which fails to correspond to the great beneficent advance in the physical and industrial sciences. From these conditions, and through the inadequacies of the mechanism of exchange, are evolved riches and poverty, and, from poverty, crime.

A higher sociological evolution of the masses, and the economic and locative freedom of the individual, giving him equality of opportunity, will again establish a just equilibrium, in harmony with improved conditions.

Prof. Richard T. Ely, in "Political Economy," p. 57, describes the situation in the following words: "Self-employment, or the employment

of others, becomes constantly more difficult, and the number who succeed in escaping the condition of employees is relatively diminishing with the progress of industry. A few escape from the ranks to become self-made men, as we say ; that is, great and wealthy employers of hundreds and thousands of workingmen ; but they are the exceptions, and must be, so long as present industrial movements continue.

“ Thrift, frugality, and temperance of the masses cannot alter this in the slightest degree. One who excels may rise to industrial power, but his superiority would cease, should others emulate his qualities.

“ This fact, which is as simple as multiplication and division, is becoming very generally recognized, and produces a widespread restlessness and uneasiness. Many perceive that they can never escape from the lot of workingmen, and that the only way to improve their condition is to elevate their entire class. The solidarity of all interests is felt as never before. . . . But another step has been taken in the evolution of industry which tends to minimize the individual still further, and to socialize production more than was even dreamed of by our forefathers.

“ As corporations are combinations of individuals, we now have trusts which are combinations of

corporations, and a great part of many industries are now carried on under one general management."

While this is a faithful description of the present relation of the employee to the employer in this phase of industrialism, it would seem that the indictment, if it be one, of present economic methods resembles that old indictment brought by the injured stage-coach interests against railroad construction and its innovations. We must, indeed, remove the causes which make the condition of the employee undesirable. But this should be accomplished, if possible, by the evolution of the less evolved to a standard of harmony with the more highly evolved by preparing the employee to successfully and rightfully demand and to give and to receive just equivalents in all employments. If the less fit, the individual, cannot be evolved into profitable harmony with the more highly evolved industrial conditions, then this harmony must be restored by the degradation and abandonment of the higher conditions. But our aim should not be to abandon any advance made in human welfare; rather to restore social equilibrium by causing relative advance of the whole social body, if possible. The evolution of applied physical economic and industrial science has outrun individual economic and socio-

logical science, causing a loss of social equilibrium which works harm to certain classes and profit to others, debasing the standard of justice and evolving trade immorality. The evolution of these physical and economic sciences should not be set back or arrested. The less evolved element, labor, should be elevated to the plain of the higher industrial conditions. The equilibrium should be restored through the better sociological and economic development of the conditions of the people, and this demands the higher material, mental, and physical evolution of the individual.

In themselves, the trust, the vast store, and the great factory are the result of advanced and modified business conditions. They are approved industrial organizations.

They are beneficial to the masses in the aggregate, and are capable of being of vastly greater benefit to them. They have rendered superfluous certain callings, set free their representatives, and caused a displacement of labor from the less profitable to the more profitable for society, and, if they work individual hardship, it follows that the adapted evolution of the individual and the evolution of his sociological and economic conditions have not kept pace with the development of the physical and economic sciences.

The individual has been superseded by the

firm, the firm by the corporation, and corporations again are being superseded by trusts, which constitute a still further economic advance. Power and machinery, applied physics and chemistry, scientific methods, firms, corporations, coöperations and trusts, deft skill and trained intelligence of worldwide grasp, are methods, organizations, and factors of a high order. They demand that the economic and sociological evolution of the individual shall be in harmony with them.

The new world which they have created makes potentially for a higher civilization, and, if we use it understandingly, it will lessen the pains and add to the joys of humanity.

The average laborer has not the economic and locative freedom or the mental, physical, and economic training which would fit him to cope on equal terms with present industrial conditions.

What are the remedies? The civil government now guarantees equality of personal liberty. Through marital restrictions it should give more equal mental, moral, and physical development to the masses, constituting in these potential dynamic equality. (See Chapter II., on Government.)

Through its educational facilities it should give to the individual practical instruction in the science of right living, and in carrying on the activities essential to a successful, well-rounded

life, constituting equality of preparation. (See Chapter III., on Education.)

Through the Industrial Army it should give to the individual the practical applied industrial, scientific, and moral training sufficient, coupled with his acquired economic and locative and his guaranteed physical freedom, to condition him to justly and effectively demand profit-sharing in all industrial combinations, to profit by the highest phases of industrialism and of productive activities, and to profitably aid in their further evolution. As fast as the masses of laborers are so fitted, corporations and trusts will become equitable profit-sharing institutions on a free coöperative basis.

With this training the Industrial Army will also confer equality of basic economic freedom by providing for the individual's material necessities, leaving him free to acquire the luxuries of life in his own way, and making him responsive to incentives of the highest order. Potential dynamic equality of the mental, moral, and physical elements; equality of preparation for life, consisting of the right kind of education; equality of thorough practical training in the highest phases of industrialism and the physical sciences; and equality of basic economic and locative freedom—these, combined, will give to the individual rea-

sonable equality of opportunity, with equality of incentives and freedom in choice of activities. Economic freedom should consist of necessary food, shelter, and raiment, and economic training should teach the care of and the ways of increasing these and other economic benefits. Locative freedom should consist of the ability to locate where desired, and to follow where interest may lead. If a man have not these, he is in economic servitude, and physically and mentally must accept such conditions as are imposed upon him by capital, be they just or unjust. With these he has economic as well as physical freedom, and, as far as these influence, he can demand and give just and equitable conditions in all his relations. We shall show how this economic freedom and training may be equitably obtained through the medium of the Industrial Army, without doing violence to any of the views expressed in this chapter and those preceding it.

CHAPTER VI.

COST OF NUTRITION. PRODUCTIVENESS OF LABOR.

THE cost per annum of the soldier to the United States Government for pay, subsistence, and clothing is about \$272. He is paid from \$13 to \$16 per month. Deducting pay at \$14.50 per month (\$174), there remains the cost of subsistence and clothing, amounting per annum to \$98, or per day to about twenty-seven cents.

In Boston good and varied subsistence for one person for one week can be purchased at retail for \$1 per week, and comfortable and reputable clothing for \$40 per year, or seventy cents per week, a total of \$1.70 per week for subsistence and clothing bought at retail in a large city. They would cost less if bought at wholesale in places where produced.

If the person lived in his own home, the cost of lodging would be but little. In villages in Michigan, families of seven persons can obtain good subsistence, lodging, and fuel for \$6 a week, or about 12½ cents per day each. The following quotations, notes, and tables were taken from, or

deduced from, the admirable work by Edward Atkinson entitled "The Distribution of Products" (G. P. Putnam's Sons, New York).

"The cost of the rations of hog and hominy—*i.e.*, bacon and corn meal—furnished negro laborers at the South is fifty to seventy cents per week, or eight to ten cents per day, to which fare must be added chickens raised by themselves, vegetables from their own garden, fish, which abound, and sugar, molasses, and salt. The prisoners in the jails of Massachusetts are served with the best quality of bread, beef which consists of the carcasses of beeves of first quality, from which the best cuts have been taken for hotels, the remainder of such special stock being purchased on contract; vegetables, tea, rye coffee, sugar, and other articles substantially necessary."

"The average cost of the materials used for food delivered at the jails in 1883 was \$44.45 per head, or a trifle over fifteen cents per day for each prisoner."

"But the subsistence of the employees in the prisons is included in this sum, and they constitute over ten per cent. of the whole number whose food is represented in this cost statement, while their food is doubtless more varied. This reduces the average, and in some of the larger jails the economy of material is greater, so that

the cost per head is even as low as twelve cents per day."

"The cost of food in a certain large factory boarding-house for women, which is maintained by the owners of some of the best cotton mills in Maryland, is as follows, for one year for one person; and the table has been carried out on this basis for 50,000,000 people:

| ARTICLES OF FOOD. | PER PERSON. | FOR 50,000,000. |
|---|----------------|-----------------|
| Meats (including poultry, fish, and oysters)..... | \$27.70 | \$1,385,000,000 |
| Butter, cheese, and milk..... | 12.18 | 609,000,000 |
| Eggs..... | 1.85 | 92,500,000 |
| Vegetables..... | 8.75 | 437,500,000 |
| Flour and meal..... | 7.64 | 382,500,000 |
| Sugar and syrup..... | 7.22 | 361,000,000 |
| Tea and coffee..... | 3.16 | 158,000,000 |
| Fruit, green and dry..... | 1.85 | 92,500,000 |
| Salt, spices, and vinegar..... | 1.67 | 83,500,000 |
| | \$72.02 | \$3,601,500,000 |

Or about twenty cents per day."

"It is easily proved that the consumption of sugar and syrup by these women was excessive in proportion to flour, but their consumption of meat was less than that of adult men in Massachusetts, as will presently appear."

Next we may consider the cost of subsisting factory operatives in New England.

“Cost of boarding seventeen adult men and eight women (three servants) for six months in 1884 :

| | |
|--------------------------------------|---------------|
| Meat and fish..... | \$540 |
| Butter, cheese, eggs, and milk | 336 |
| Vegetables..... | 72 |
| Flour and meal | 132 |
| Sugar and syrup..... | 87 |
| Tea and coffee..... | 54 |
| Fruit, green and dry..... | 33 |
| Spices and salt..... | 24 |
| Total..... | <hr/> \$1,278 |

This sum represents 4,575 days' board, at twenty-eight cents per day to each boarder. These boarders being principally men engaged in arduous mechanical work, it will be observed that the quantity of food, especially meat, is large, and the cost correspondingly high, as compared to the subsistence of women in Maryland.”

“On the basis of these and other data which have come under my notice, there can be no question that an ample and varied supply of nutritious food can be supplied in the Eastern portion of the United States at a cost not exceeding twenty cents per day, or \$1.40 per week, and probably for a less sum in the West, provided it is judiciously purchased and economically served.”

“ Dr. Engel, of Berlin, Carroll D. Wright, of Massachusetts, and other fully competent authorities compute the ratio of the prime cost of food consumed in the families of workingmen at fifty per cent. of their income in respect to the thrifty and well-paid, but at sixty per cent. of the whole income of common laborers, or persons whose wages are low.” . . . “ No one can doubt that the actual cost of food prepared for use in workingmen’s families would be, on an average, from twenty-five to forty per cent. more than the standard of twenty cents a day in money, in the more densely populated part of the country, or else, if only twenty cents a day were spent, it would fail to yield half as good a subsistence as is obtained in the establishments cited, for want of skill both in purchasing and in cooking.”

. . . “ Let it be observed that, while it is proved by these statements that an ample and varied subsistence can be supplied to adults at twenty cents a day even in the Eastern States which are most distant from the fertile plains of the West, no such economy is realized except under conditions similar to those cited.”

In the tables quoted for cost of subsistence of women, the proportion of flour and meal to the total of subsistence is as 1 to 8.43.

In the table quoted for men it stands as 1 to

8.80. We may take 1 to 8.50 as a mean. We shall show that the labor of 200,000 men will raise grain, make flour, and transport it an average of 1,500 miles in sufficient quantity for a population of 50,000,000, which would be about the number having the Industrial Army rights. Then we have $1 : 8.50 :: 200,000 : 1,700,000$, the last figure representing the number of men necessary to produce the balance of subsistence. Adding the 200,000 men, we have a total of 1,900,000 men required to produce a varied and complete subsistence for 50,000,000 people.

If we add to this number twenty-five per cent., as necessary for producing shoes and the material for clothing, and for producing the dwellings for the Industrial Army, of which it would be proprietor and for which no rent would be paid, we have, in round figures, 2,375,000 as the number of laborers required to feed, clothe, and house 50,000,000 people. These figures can only be approximate, and may be somewhat wide of the mark.

With our present population of about 70,000,000 the estimates are probably too high. We may suppose that about 8,500,000 men and women would be in constant service in the Industrial Army. If 2,375,000 can perform what is required by the Industrial Army, there will remain a force of 6,125,-

ooo—a number sufficient to compensate for errors in calculation, and to rapidly build and develop railroads, telegraphs, and other necessary public works, create and develop all necessary means of production and distribution, build the Industrial Army City, and provide all rural homes.

No doubt millions of poor men too old for the compulsory service would gladly volunteer for life in the Industrial Army, receiving in return its benefits of raiment, food, and shelter. These volunteers would probably constitute all the men the Industrial Army could profitably employ in the rapid building of its Industrial Army City, in the construction of its rural homes, and in the development of its manufacturing plants and public works for production and distribution.

Upon one of the great wheat farms in Dakota, which produces 20 bushels of wheat to the acre, "the labor of one man produces $18\frac{3}{4}$ bushels per day." "Multiply by 300 working days in the year, and the equivalent is 5,625 bushels for one year's work of one man. Leave 1,125 bushels for seed and home consumption, and we have 4,500 bushels, from which 1,000 barrels of flour will be made. A year's ration of wheat flour for one person is one barrel, which will make 275 pounds of baked bread."

"The raising of the wheat represents the labor

of one man for one year. The moving of the wheat and flour over 1,700 miles represents the direct labor upon the railway of one and one-half men working one year."

"The direct labor in milling and in making barrels from the log represents the labor of one man working one year. Add to the work of the three and one-half men thus far counted that of one man for six months, or one-half man for one year, in repairing machinery, and 1,000 barrels of flour delivered in New York represent only the direct labor of four men for one year." "The entire profit of the railroads for moving 5,500 bushels of wheat 200 to 300 miles, and 1,000 barrels of flour 1,000 miles, at the present rate, has been computed by one of the most competent experts at \$225, being $15\frac{1}{2}$ per cent. of the charge of \$1,440. That is to say, the profit of the railway for bringing 1,000 barrels of flour 1,627 miles is $22\frac{1}{2}$ cents per barrel—just one-half the cost of the barrel in which the flour is packed, or a trifle more than the value of the empty barrel in New York. The statement that the wheat from which 1,000 barrels of flour may be made, which represents the yearly ration of 1,000 persons, can be raised as the equivalent of one man's labor for one year, may be questioned. It seemed almost incredible to the writer until he had proved it by incontes-

table evidence of many competent witnesses.” . . . “On a well-managed and thoroughly equipped farm, in a season in which the crop is 20 bushels to the acre, the average for one day’s work of one man has been proved to be $18\frac{3}{4}$ bushels. But all farms are not well managed nor well equipped, and of course a less yield is the result. Fifty million people would require 50,000,000 barrels of flour per annum, the equivalent of 225,000,000 bushels of wheat. It would require the labor of 50,000 men for one year to raise the wheat.”

“To make the barrels, to mill the wheat, and to transport it 1,500 miles would represent the labor of 150,000 men, or a total of 200,000 men for one year to furnish and deliver one barrel of flour to each of 50,000,000 people.”

To raise this amount of wheat—225,000,000 bushels, at 20 bushels to the acre—would require 11,250,000 acres of land, or 17,578 square miles—a tract about 132 miles square. The area of Dakota is 150,000 square miles, or $8\frac{1}{2}$ times the extent required to raise 225,000,000 bushels of wheat, at 20 bushels to the acre, to supply 50,000,000 people one year. The number 50,000,000 is taken as a basis, for out of a population of 70,000,000 the Industrial Army would serve only about 50,000,000. Children will be reared by

parents, and some adults will not draw army rations. There are other examples of the saving of labor which has resulted from the application of adequate capital and skilled labor. The year's work of one person is as follows : one operative in a cotton mill spins and weaves cotton cloth for 250 persons ; one in a woollen mill, woollen cloth for 300 persons ; one in a coal mine or iron furnace serves 200 pounds of iron to each of 500 persons ; one in a men's boot factory makes annually two pairs of boots or shoes for each of 800 persons ; one in a woman's boot or shoe factory makes three pairs a year for each of 1,000 persons ; one in a shirt factory sews 2,400 excellent shirts, or more of lower quality, or four a year for each of 600 persons or more.

The area of the United States, omitting Alaska, is a trifle less than 3,000,000 square miles. In a broad and general way, we may assume that one-half of this area is good arable land, one-quarter good pasture land, and one-quarter forest, mountain, and mining territory.

" A cotton field of 20,000 square miles, or about 140 miles square, or 12,800,000 acres, would yield, at half a bale per acre, 6,400,000 bales. Half a bale per acre is a miserable yield. With good farming the yield should be one bale per acre, at which rate half the area mentioned would suffice to produce 6,400,000 bales."

“If four sheep to the acre may be sustained upon wild land, and the average wool clip be four pounds to a sheep, 40,000 square miles, or 200 miles square, would sustain 102,400,000 sheep, furnishing more wool than we need.”

“One hundred and twenty thousand square miles, or about 350 miles square, may be devoted to beef, dairy products, and poultry farms, which would be more than doubly sufficient for present consumption. . . . In 1880 the number of milch cows was estimated at 12,500,000, and the number of eggs at 500,000,000 dozen, valued at \$80,000,000.” . . . “It has been proved entirely possible to feed two cows one year on the corn-stalks, saved in pits, which can be raised on one acre of fairly good land, if to this green fodder be added a ration of meal made from the cotton seed, which was almost all wasted until a very recent time.” . . . “The relative importance of meat in the subsistence of our people has been shown in the foregoing tables. A large portion of our beef is now produced by almost semi-barbarous methods on the far distant plains.” . . . “Provision has been made for the corn-field, and, if pitted forage is as fully justified on a broad scale as it has been in the successful experiments of many able men who have applied brains and capital to the use of land, it will be

necessary to assign only a small area to beef.”
. . . “Five hundred pounds of meat to an acre would yield nearly one pound of beef per day to our present population (reckoning two children as one adult.)” . . . “112,500 square miles of cornfields, producing at the rate of 25 bushels to the acre, would produce 1,800,000,000 bushels. If 1,000,000,000 bushels be converted into pork, at the usual rate of five pounds of corn to one of pork, it would give nearly 100 pounds of pork to each head of our present population. This would leave 800,000,000 bushels of corn for human or cattle food.”

We may set aside 60,000 square miles for the growing of wheat, which is about three times the amount necessary for the supply demanded, as has already been shown. “If these propositions can be sustained, it follows that our present crops of corn, wheat, and cotton, and a very much increased product of the dairy and poultry-yard, as well as of meat and wool, can be raised on 352,500 square miles, or upon twelve per cent. of the total area of the United States, not including Alaska; and even this assignment of land is nearly double what might be required if the intensive system of farming were adopted by men of sufficient intelligence and capital to conduct all parts of the work in a reasonably good way.”

“The end is not yet : the application of electricity developed by water-power to the dissociation of salt or sea water may again reduce the cost and increase the production of alkalis. In the production of fertilizers the wide distribution of Stassfurt potash has given a supply of that necessary element at a very much reduced cost. The working of the phosphate deposits of South Carolina, and the discovery and development of the huge deposits in Florida, have given assurance of an unlimited supply of phosphoric acid to the cotton and grain fields of this continent for centuries to come, and have also added an important commodity to our exports. The development of the products of cotton seed has added an oil of the greatest value and increasing abundance,—useful both as a food product and as an element in manufactures. The saving of the waste products of formerly almost useless phosphoric iron ores, which are converted in the basic process of making steel, and their conversion to use as a fertilizer, end in the increased production of bread from iron stone. Processes have been perfected in Europe, and are now being developed in the United States, for the conversion of the previously wasted gases of the coke-ovens into sulphate of ammonia.

But the most important discovery of the pres-

ent decade, giving assurance of an abundant food-supply to any population that can occupy the land for ages to come, is the conversion of the nitrogen to the renovation of the soil through the bacteria that, living and dying in the nodules attached to leguminous plants, dissociate it from the air. This source of nitrogen, in combination with the potash and phosphates already named, gives assurance of the nutrition of the soil, the plant, the beast, and the man in such abundance that no one can yet measure the limit of production of an acre of land anywhere." *

Yet amid plenty there is want. The mechanism of exchange is out of harmony with sociological conditions. The distribution of wealth fails to take place harmoniously and equitably. The channels of trade are clogged with wealth; efforts are made to restrict its production, and to create poverty, to relieve the congestion of trade. Yet millions are suffering for the want of the very articles which they are willing and able to produce in their idleness, but are prevented from producing because the mechanism of exchange fails to take, convey, and equitably exchange their products. "The evils that begin to appear spring from the fact that the application of intelli-

* Edward Atkinson on "The Battle of Standards;" *The Forum*, April, 1895.

gence to social affairs has not kept pace with the application of intelligence to industrial needs and material ends. Natural science strides forward, but political science lags. Give us but a market, say manufacturers, and we will supply goods without end. Give us but work, cry hungry and idle men." *

With our present potential forces of production, the reader can readily picture the plenty, comfort, and happiness which would reign under a desirable, just, and equitable mechanism of production, exchange, and distribution, which should permit all people desiring to work to be constantly and profitably occupied without infringing the principles of freedom of industry and just individual liberty, and which should distribute their products in just proportion and without loss.

* Henry George : " Social Problems," p. 15.

CHAPTER VII.

THE INDUSTRIAL ARMY.

Conditions necessary to its success. Plan of organization. Conditions of service. Nature of its obligations, and warrant of the State for requiring their fulfilment. Benefits to be received. Distributing stations. Option of drawing supplies.

IN view of facts set forth in the preceding chapters, given an industrial state, under a just representative form of government, and give the present development of the economic and physical sciences, coupled with the free use of the resources furnished by natural media, it would appear that the labor of an average body of educated workmen, directed and controlled by the highest intelligence, for a maximum term of five years, the product of which labor, with the added income accruing from a world-wide freedom of exchange, should inure entirely to their own benefit, would insure to them good subsistence in raw foods, good clothing, and comfortable lodgings for life. The increased rewards of labor already

foreshadowed, and the greater increase promised for the near future, will make a still better showing.

Among others, the following possible and equitable conditions would be essential to the fullest achievement of this end: continuously applied and educated productive labor, in full possession of all profitable natural monopolies, assisted by the best appliances of modern science, directed by the highest talent that life-position and honor can command, removed from politics and its influences, and protected from the crises, idleness, losses, and extravagances consequent upon an irresponsible, disconnected, independent mechanism of exchange and distribution; the world's freedom of exchange, and freedom from all unjust economic restrictions; an economical, intelligent, just, and equitable distribution of products, not destructive of incentive to effort, but awarding the full benefits of labor to the individual co-workers in proportion to merit.

Can this labor be so controlled and directed without destroying the incentives necessary to make it productive? Can adequate talent be found to direct it in the ablest sense and to the profit of labor, without the incentive of immediate large personal gain to the directors?

The United States militant army offers an ex-

ample which warrants an affirmative answer to these questions.

In the present chapter the writer gives an outline of a proposed organization for an Industrial Army fulfilling these conditions.

(Hereafter the letters I. A. will stand for "Industrial Army," and the letters I. A. C. will stand for "Industrial Army City.")

The I. A. organization will be created by legislative enactments, and will exist under practically the present form of the United States government. A constitutional amendment will be necessary, making suffrage conditional upon previous fulfilment of I. A. obligations. This may be necessary in order to remove the management of the I. A. from political influence.

The organization and administration of the I. A. will be strictly military, and upon the same lines as those of the militant army of the United States.

Criminal matters and misdemeanors will be judged by court-martial, and from the judgments there will be no appeal, except to executive clemency; but parental care and kindness will temper all.

The President of the United States will be commander-in-chief of the I. A. Both the commander-in-chief and the commanding general of a

department will have the power to summon, for consultation and advice, any citizen or citizens of the United States. Citizens summoned will receive mileage expenses and military rations only. Each citizen will cheerfully recognize that his duty to the social body demands that he render this service to the best of his ability.

Upon becoming of requisite age, each able-bodied male citizen, after passing an obligatory medical examination for physical fitness, will be required to enter the I. A. for a normal service of five years, or, at his option, to make a cash payment of two thousand five hundred dollars, in lieu of service.

If a citizen is unable to satisfy the physical requirements of the medical inspection, but is materially able to make the cash payment, he must make the payment, and it will entitle him to I. A. rights. The actual service will entail no unjust hardships. Its direction will be kindly.

The employment of workmen in large bodies, under respected and intelligent direction, will give a social zest to labor, and tend to make of it a happy pastime. The service will be looked forward to with pleasurable anticipation, and each citizen will be anxious to acquit his debt of obligation to the I. A.

The entrance age for men will be from 20 to 22

years, at the option of the citizen,—an age at which he will have completed his educational course, as provided for in Chapter III., on “Education and Curriculums.”

The entrance age for women will be from 18 to 20 years, with similar option. They must pass a medical examination for physical fitness.

The assuming of I. A. obligations by women will be optional, but the conditions will be such as to induce the assumption of them.

If these obligations be assumed by them and fulfilled by services or cash payment, they will receive the same benefits as men, and the labor required of them, and the rules and regulations governing it, will be suited to their sex. Cotton and wool factories, canning of provisions, and the lighter mechanical and clerical work will furnish ample and appropriate fields for woman's activities. She cannot acquire the I. A. benefits without rendering the full equivalent service, or making the full cash payment.

Ultimately the time of service in the I. A., or its equivalent cash payment, will be limited, when it can be correctly ascertained, to a period just sufficient to provide the materials for food, shelter, and raiment. When transportation lines, manufacturing plants and equipments, and a sufficient number of dwellings shall have been

completed, three to four years' service should suffice.

The activities of the I. A. will be directed to the production, exchange, and distribution of economic benefits. It will possess and administer the resources furnished by natural media and by natural monopolies for the equal benefit of all, and will give the benefit of the highest intelligent direction to the efforts of each citizen, until the satisfaction of his necessities is assured by his own labor. It will thus replace ignorant idleness by intelligent thrift.

The obligation of service in the I. A., and the receipt of its accruing benefits, may be considered to be in the nature of an obligation to acquire an individual life annuity, which shall insure its beneficiary against misfortune and want, and which shall confer upon him economic freedom, and through this freedom shall guarantee to society that the possessor of it shall not become a public burden.

The warrant of the State for making this service obligatory, and in the nature of an annuity or insurance, has been stated in the present work in Chapter II., page 7.

From the definition of the State's duties there given it follows that, if for valid reasons the State is to assume the care of its needy helpless, and of

its indigent infirm and aged, and is to suppress its criminal and dangerous classes, it should assume control of, and tend to eliminate, the conditions from which these classes are evolved, and, where it is possible, to require of the individual a guarantee that he shall not become a public burden.

The I. A. will not be an eleemosynary organization. Its exercise of beneficence will be negative rather than positive, and it will not destroy proper incentives or the normal connection between conduct and consequences. It will be a vast national profit-sharing trust, just and beneficent, in which the benefits will accrue, not as at present to a few individuals, but to all the people, each citizen receiving benefits in proportion to the value of his services, and different periods of service being required according to capacity to acquire equal benefits.

The I. A. will ask for no material benefits from the State to which it is not entitled. It will render equivalents for all others. It asks for the administration of justice, and for protection in the enjoyment of the fruits of its own labors. It asks for freedom from politics and from scheming political intriguers. It asks for its rights to natural monopolies, and to the creation of them, and to sunlight, air, and earth.

Forty-nine hours will constitute a normal

week's work, but in light occupations the hours will be more, and in less desirable occupations less, so as to obviate injustice to workers employed at the more disagreeable and arduous tasks.

In addition there will be, for men, one hour of military drill each week, and, for both sexes, two hours of lectures upon the principles of the work upon which they are engaged, upon the principles and methods of corporations, trusts, and other industrial organizations, and upon other scientific and philosophical subjects.

The aim will be to make the workers familiar with the scientific principles of each branch of industry that concerns them, present and future, with the principles of coöperation and of trusts, and with the laws of production, distribution, and exchange, so that in after life they may be experts in their callings.

Each individual member of the I. A. may, on entering the service, choose the branch of industry in which he wishes to commence to serve. If there are no vacancies in the chosen department, he will, in his turn, be transferred to it as soon as a vacancy occurs, and he may be transferred to learn different branches of industry, but only in so far as he is deemed fit, and provided such choice and transfer does not conflict with the interests and needs of the army.

Note will be taken of the efficiency of each worker, and this efficiency will be credited. A worker performing more or less than the normal amount of work in the usual hours will be credited with the surplus, or debited with the deficiency, in points each day. The final balance of this total credit, or debit, will be added to, or deducted from, the time of service required in the army.

This will give scope to the exercise of positive beneficence. The strong and capable may perform an extra amount of work, and allow his or her credit marks to offset the debit marks to the charge of a less strong and less expert companion.

The full normal service of five years rendered will entitle the honorably discharged citizen to food, raiment, and shelter for life—that is, to his or her *pro rata* share *per annum*, of clothing, cloths, shoes, hosiery, raw food supplies, and non-perishable groceries, and to gratuitous medical assistance and free burial. The sum total, and the amount and nature of each particular supply, will be determined at the beginning of each year by the directors, and must be governed by the amount on hand to be distributed.

These supplies will be distributed from established stations.

If a citizen enters the service, and for good rea-

sons is unable to complete it, and receives an honorable discharge, he will be entitled to his or her share of benefits in proportion to credited time served, to be determined in each individual case.

The full service will further entitle the acquitted citizen to a residence apartment free for life in the I. A. C., as soon as such residences can be created, or to a rural or farm home, or to an apartment in any approved city of his choice where the I. A. may deem it to be for the best interests of all to provide apartments. This confers upon the citizen the choice of locality and of facilities. In the earlier years of the I. A. organization the acquitted I. A. citizens will be entitled to the residence benefits only so fast as the I. A. is able to profitably construct them in sufficient numbers to supply the demand. So fast as the I. A. shall be able to construct a sufficient number of homes, rural and city, to supply all demands, they will be furnished in the desired localities to citizens desiring them, immediately upon fulfillment of I. A. obligations.

The rural home will be fitted and ready, but must be put together by the citizen. The I. A. C. houses will be built, ready for occupancy.

For the I. A. C. apartment the citizen must pay \$200 extra in service or cash, to compensate

for the extra cost of these houses to the I. A. and for the city advantages which they afford.

I. A. citizens in different sections of the country may exchange I. A. residences with each other at will, subject to I. A. regulations.

A book with the name, army number, and personal description of the holder will be delivered to each I. A. citizen annually. The book will contain numbered and dated coupons for various designated rights, which will be cancelled when used, or when dates for drawing are passed. The old books with unused coupons must be returned. A simple account will be kept with each citizen. The book can be used only where issued, but an account may be transferred and opened elsewhere on demand, not, however, for less than two months. Rights to food supplies can be retroactive, or anticipatory, only to the extent of seven days from specified limits. Some supplies will be drawn only semi-annually. Stations for distribution of material supplies will be established in localities where not less than five hundred persons draw supplies regularly, and situated on any regular I. A. line of transportation. Inland transportation from distributing stations must be at the expense of the citizen. To cheapen distribution, supplies will be moved in bulk only.

Distributing stations must not be less than four miles apart. There will be such stations alongside of I. A. docks and railroad lines, for the economical handling of freights received by boat or train. Elevators of sufficient capacity will raise loaded cars to the various floors of the distributing houses where the freights are to be discharged, and the unloading and placing will be effected by specially adapted machinery.

Any further distributing departments, if accorded, will be operated at the expense of those asking for them. Commodities will have an estimated value affixed to them. Citizens will have rights to certain designated rations and supplies representing a certain estimated money value. The right to drawing various supplies may be exercised, if permission is so accorded, in each individual case, by drawing all in any one supply of an equivalent value, food, clothes, or shoes. This option will be accorded only so long as it is not abused and does not disturb the equilibrium of stored products. Its object is to enable each individual citizen to furnish such of his or her own supplies as he or she may have best facilities for doing, according to locality and resources, and thus to enjoy in greater quantity those supplies with which he or she is less well equipped. These rights to benefits, and the material benefits

themselves when drawn, will be strictly personal. The supplies cannot be drawn by proxy. They cannot be alienated, seized, or sold, or transferred by gift or otherwise. They may be shared in one's own household and with one's immediate family, and for ordinary family uses.

The immediate family will be held to mean husband, wife, unmarried children, servants, and guests. The rights will cease at the death of the person who acquired them. All rights may be suspended, if fraudulent use be made of them. Extra perishable or costly and fragile food products, meats excepted, will not be furnished in their original conditions.

For instance, milk will be condensed, butter salted, and fruits canned, so that they may be produced cheaply, each in its most favorable locality.

CHAPTER VIII.

THE INDUSTRIAL ARMY—CONTINUED.

Promotion for merit. Examinations. Officers. Records of aptitudes. Patents. Machinery. Transportation lines. Acquiring of natural monopolies. Mines. Convicts. Contract Asiatic labor.

ALL men will enter the army as privates.

Men promoted from the ranks for demonstrated merit will fill all the grades of officers below the rank of major. The officers created by promotion will not be entitled to extra pay. The honors conferred for merit must be sufficient reward for extra service. At the close of their services, these officers, if they have a diploma from the I. A. Technical School, will pass an examination for fitness for service as officers in the permanent I. A. If they pass the examination successfully, they will receive brevet commissions (without pay) until their services are needed, when, if they desire, they will be given commissions in the regular I. A. service at regular pay. Any officer who has not the I. A. Technical School diploma

may take the Technical School course and diploma, after his army service, and then apply for examination, and for a commission, upon the same terms as before. This will give talent a career in the service of the State, and the State a choice of talent.

Privates will also be required to pass examinations for diplomas as experts in industrial branches. If successful, they will then be placed upon the list for paid employment and for regular promotion to official grades, whenever the I. A., or the general government, or State governments may need their services.

Records will be kept of the standard of the varied efficiencies of each officer and of each private passing an examination. These records will include indications of their special aptitudes. Choice of these men for future public services will be based upon these records. These incentives will tend to bring out the best there is in the men during their service, and to discover and place upon record the merits of each citizen in the country, and thus bring him to the notice of every private enterprise requiring special talent and skilled service.

All officers above the grade of captain will be commissioned officers of the regular permanent I. A., with pay, pensions, and conditions corre-

sponding in the main to those of the same rank in the regular United States militant army.

The I. A. may have the free use of all patented inventions, and the greatest optional price paid for the use of any one shall not exceed full rights to I. A. benefits, with commutation of its service to the inventor, and the conferring of medals and of various degrees of decorations of honor in recognition of public service. The present system of patents will remain unchanged, outside of the I. A.

The methods and machinery of the I. A. will be of the best. Its tools and machines will be made in its own shops, and they will be changed whenever change is advantageous.

A slight advantage will pay for the replacing of a machine running at its full capacity day and night, as those of the I. A. will run, which would not pay for a machine used only a part of the time, as is the case in small industries.

The I. A. will take advantage of the markets of the world, selling that which it can produce, and deliver under the most favorable conditions elsewhere, and receiving in exchange for its own needs those commodities which can be produced cheaper and better elsewhere than it can produce them. The work of the I. A. will be directed to the production of the goods most profitable either

for its own consumption or for exchange for commodities for its own use. Its imports, of whatever nature, will be free of duty, and in the main the cost of freightage will be small, for much of its transportation may be effected by the use of the United States naval cruisers, in times of peace.

Each agricultural product will be cultivated where climate, soil, and other conditions are most favorable for its particular production.

Its vast manufacturing plants will be located where the combined facilities afforded by climate, power, raw material, and transportation further the interests of the consumer in relation to the article to be manufactured. Many may be located below Lake Erie and near Niagara Falls, where power now going to waste will turn the wheels of varied industries. Each building will be especially designed for its purpose, and will form a part of its automatic machinery of production, working in unison with other parts to form a harmonious whole.

The I. A. will operate its own vast system of production, exchange, and distribution. Movements of commodities will be effected over its own transportation lines, by water and by land, and in bulk of car and ship loads, with handling expenses reduced to a minimum.

The I. A. will possess and operate for its bene-

fit, and for that of the social body at large, such and all natural monopolies as may constitute sources of profit, and which may be necessary for the welfare of its citizens (with the exception of municipal monopolies), as fast as they can be safely and consistently acquired by the State, and turned over to the I. A., or be created by the efforts of the I. A. Such will be railways, telegraphs, and telephones, and as much land as the I. A. can occupy and use profitably, and all necessary mines and mineral resources wherever situated.

The balance of land will gradually be acquired by and belong to the State.

Municipal monopolies will be owned and operated by the municipalities in which they exist, or in which they may be created.

All other natural monopolies, not in the possession of the I. A., will belong to the State, as fast as they can be prudently acquired.

These natural monopolies have been enumerated as follows :

Land, mines, and all mineral resources, railways, roads of all kinds, streets, canals, docks, bridges, ferries, waterways, harbors, light-houses, telegraphs, telephones, post offices, electric lighting, water works, gas works, street cars of all kinds.

"Some of their characteristics are :

"(1) What they supply is a necessity.

"(2) They occupy peculiarly favored spots or lines of land.

"(3) The article or convenience they supply is generally used at the place where and in connection with the plant or machinery by which it is supplied.

"(4) This article or convenience can, in general, be largely if not indefinitely increased without proportionate increase in plant and capital.

"(5) Certainty and harmonious arrangements, which can only be maintained by unity, are paramount considerations." *

They are businesses in which the conditions practically exclude competition. They may consist of the resources furnished by natural media. Land and its contents are rightfully the heritage of all the people ; so are sunlight and air.

As fast as the mines can be acquired for the I. A., United States and State convicts will be employed in them, in connection with contract foreign labor.

Work of a particularly disagreeable nature, and that requiring only severe and unskilled manual labor—such as mining, building of railway beds,

* Mr. Farrar, in his book "The State in Relation to Trade." The English Citizens Series.

digging of canals, handling of raw materials, and the coarser and heavier agricultural work—will be performed by Asiatic contract laborers at the lowest rates. These laborers will be engaged upon the most favorable (but just) terms which it is possible to make for their services in their own country, and they will be rigidly returned to their own land at the expiration of all original or renewed I. A. contracts with them.

These contracts will involve no hardships upon the laborers, beyond those they endure in their own land ; and their work will be of great benefit to the I. A. The laborers will be paid quite as high wages as they could earn in their own country. They will not labor more hours than at home, and they will be better fed and better cared for than they are in their own land. Concessions for the use of land in foreign countries may be obtained, and the land may be worked by the native contract labor, for the production of such exotic products as are useful for the I. A.; for instance, coffee and tea and certain drugs, chemicals, and spices.

The funds for the payment of this contract labor will be obtained from the money received in lieu of service for I. A. obligations, and from the sale of the most profitable of I. A. products.

The groceries, drugs, and chemical compounds

of the I. A. will have large and ready sales at good profits, on account of their known purity, and so will its products of whatever nature, where confidence in the purity is an important element. Each product will be of the best, and of known purity.

I. A. conditions and contract labor will greatly lower the cost of railroad and telegraph construction, of irrigation, of mining, and of general production. For instance, if an air line of railroad were to be surveyed, built, and equipped between New York and Chicago by the I. A. engineers, and the rails and all material were to be furnished from the I. A.'s own mills and shops, the road bed to be built by Asiatic contract laborers living in tents and receiving uncooked rations furnished by the I. A. ; and the cost of construction to represent no watered stock or profit to any one, the cost of the road would be surprisingly small compared to the amounts at which such lines are capitalized and valued to-day. The same may be said of the present network of telegraph and telephone lines ; their construction and operation by the I. A. would be a matter of small moment compared with the amount of tax they now collect from the public.

The State will not necessarily utilize or purchase existing railroad or telegraph lines and

their equipments, or existing plants or monopolies which are not necessary or profitable for its own use. It will not pay prices in excess of the probable present cost of construction by the I. A. For present owners to require a higher price would not be more just than for the farmer to require that a fall in the value of his wheat from seventy-five cents to fifty cents per bushel should be made good by the State ; or for breeders of horses to ask the State to indemnify them for the decrease in the value of their stock and farms due to the employment of bicycles and electric traction, or for growers of cotton to ask to be indemnified for the competition of India cotton, or for them all to ask the State to continue their original incomes. The displacement of capital and labor by new and better processes has never been and cannot justly be indemnified by the State.

Any improved machinery or industrial organization which performs a given amount of successful labor with fewer hands, or with less capital, and at less cost, tends to benefit the masses. These changes may cause financial loss and temporary hardship to displaced men and capital, but the welfare of all demands that such men and capital should transfer their services to such other enterprises as best benefit the social body. Methods and occupations not the most profitable

and advantageous to the social body, furnishing the maximum of benefit for the minimum of cost, cannot justly be continued or subsidized at public expense.

Each branch of public work and of production must be conducted for the best interests of the whole I. A. and of the aggregate of its consumers. In this work the writer does not propose the purchasing or the acquiring of any private property by the State for the I. A. for which a fair value shall not be paid, nor does he propose the conferring by it of any benefits or favors upon individuals or corporations, by purchase or otherwise, other than those for which the individual, or the corporation, shall have rendered a just equivalent.

All lands, mines, and mineral resources, waterways and inland waters, now owned by the States, or the United States, should continue to be held by them, and all others which may be necessary for the people's welfare should be acquired at their just actual (not cost) value as fast as the State can consistently and safely become possessed of them. Such of these lands and waters as are needed by the I. A., including all of the mines and mineral resources, will be turned over to it for its use. The balance of land will be held by the State, and that which is best

adapted for use will be leased to private citizens on the best terms obtainable.

Its rentals and unearned increments of increased value will accrue to the State, and will be the equal heritage of all. Other land will be devoted to State forest culture, the preservation of watersheds, and to the breeding of game and fish in great preserves, in which shooting and fishing and summer cottage privileges may be let.

Present owners of known mines and mineral resources should have one year to make known and have their claims verified, admitted, and registered, and to adjust their values. These claims can only be valid for what is in sight, or to what is known and can be shown to exist, and is certified to by a competent commission of United States army officers.

All further mines and mineral resources not so registered, or to be discovered, should belong to the State, regardless of titles to land ownership. Their discovery on private land will not constitute private ownership.

Municipalities will ultimately own all city ground, acquiring it at a just price value as fast as financial measures may be devised for prudently and wisely accomplishing this. They will lease the same to private parties, for ground rent

or otherwise. The terms of its leases, with re-valuations, will be similar to those now given by the Astor estate in New York city, and by various corporations. The terms of the lease being the same, it should make no grave difference to the tenant whether he lease property from the Astor estate, from a corporation, from the municipality, or from the State. All future charters or privileges granted by State or municipal authority to private organizations for the use of, or for the creation of, natural monopolies, should be so granted only for a limited period; some for one year, and none to exceed the term of thirty years, according to their nature. At the expiration of the term of such charter or privilege, the whole plant and equipment of these monopolies should revert, without further compensation, to the United States, or to the municipality in which they are located. Such charters and privileges should be accorded only in exceptional cases and for the good of the social body, and where the public interested is unable at the time to properly perform the needed services.

The time of service in the I. A. will be made a period of practical applied training, under the best professors, in which its members will be developed morally, mentally, and physically, along the broadest lines of progress. The habits of honesty,

industry, order, application, and perseverance commenced in schools will be continued and strengthened in the real work of life.

The principles of ethics, justice, morality, and beneficence inculcated in childhood years will be added to public and trade morality and honesty, and they will be further evolved and strengthened in actual applied and pleasing experiences, and by daily example.

With the labor of his own hands each citizen will banish forever from his life the menacing skeleton of want and misery. Equality of preparation and opportunities will be achieved.

On leaving the I. A. the citizen will yet be in the bright, rosy-hued morning of life, with personal freedom, and with a material future, and economic and locative freedom guaranteed. He will be prepared for a future of the highest usefulness to himself and to society at large, and he may achieve these upon the lines of his own choice. He will be prepared to enjoy the greatest happiness, and to confer the same upon others.

The world will be before him. Art, science, and philosophy, industry and wealth—all will woo him, and with the magic of youth, health, training, and freedom he may win all that they offer.

CHAPTER IX.

THE INDUSTRIAL ARMY CITY.

THERE will be but one I. A. free city in the United States. I. A. citizens who have acquitted their I. A. obligations will be entitled to apartments in the I. A. city, or to farm or rural homes in any approved part of the country, or to apartments in any other city where acceptable sites may be donated by municipalities, and in which the I. A. may deem it to be for its best interest to accord them. Occupancy of houses in the I. A. city will be subject to the I. A. conditions. Their style of architecture, their construction, and the size of the apartments will be fixed and controlled by the I. A., and will be such as it can afford, conditioned by the best interests of the I. A. and of the occupant.

The larger the city, the cheaper in proportion can it be built, supplied, and operated, thus furnishing the maximum of luxuries, comforts, and pleasures for the minimum of cost. The city will be located, laid out, and built from the beginning without regard to present centres of industry and

population, and it will not be located upon the sites of these centres. It must be on the seashore, in a latitude south of the troublesome snow line. It must have a safe, capacious harbor and unlimited dockage. Other main considerations influencing its location will be healthfulness, a mild climate, pure water, and good drainage and sewerage facilities.

Or, failing the seashore, the necessary conditions must be combined on the banks of a great navigable river, near its mouth, where there is a sufficient depth of water to the sea to float great ocean vessels, thus affording cheap and rapid water communication with foreign lands, and with the seaports and interior of our own country.

In either location its harbor and dockage must be able to safely float and accommodate a world's commercial fleet of the heaviest tonnage. Its railroad communications can be quickly built, and the present lack of them will not weigh against natural advantages in the choice of location. It should be in easy communication with the most advantageous sources of raw materials, especially of coal and iron.

The city will possess, and be located upon, a tract of land not less than forty miles square, or sixteen hundred square miles, title to all of which would be acquired by the I. A.; and the

future city would be properly laid out before commencing to build.

This tract would be sufficient in size to accommodate, if ultimately necessary, a population of fifty millions of people, with all the necessary public and private buildings, storehouses, docks, and commercial houses, at the same time leaving space for numerous great public parks. The I. A. will possess further outlying land suitable for agriculture and manufacturing purposes, and for city extension.

It will lease to proper occupants these lands for stated terms, with re-valuations, so as to control for its own profit all increments of value.

Only structural steel and clay wares will be used in building. These materials will be of the best sizes, shapes, and quality, and sufficient in quantity. All structures will be absolutely fire-proof and practically indestructible. They will be intended to last indefinitely, or as long as they well serve their purpose. The best engineering and architectural talent of the country will be employed. The architecture will be varied, ornamental, and harmonious. Apartments, stores, and public buildings will be so distributed and arranged as to best meet the requirements and to most fully utilize sunlight,

air, and space. Buildings for schools, churches, and all public uses will be located at convenient intervals. The houses will not be less than twelve stories, or one hundred and sixty feet, in height, and as much higher as it may be profitable to make them. The streets will not be less than one hundred and sixty feet in width, for buildings of twelve stories or one hundred and sixty feet in height, and they will be proportionately wider for higher buildings.

Under each street will be two subways, each sixteen feet in height and the full width of the street, built the one over the other, and running at right angles with each other, the second resting upon pillars over the first, and the street upon pillars over the second. Under the lower subway will be a sewer ten feet in height, and as wide as may be necessary. The subways will not be further under ground than is necessary for good drainage and sewerage ; so there need be but little excavating.

These subways will contain all the railroads and transportation lines. Their width will permit of two express, two local, and two freight lines in each subway ; and the two subways will allow for cross-town lines without grade crossings. Great elevators will transfer loaded cars between the upper and lower subways, so that

certain cars may be run to any important part of the city without change.

Much subway space will be required for the service and stations of the great through railroad lines. Through trains from all sections of the United States will enter the city through its subways from every direction, and focus in vast stations in its centre.

These subways will also contain all water pipes, electric wires, and pneumatic tubes, and they will serve for all the various purposes for which subway space is adapted. The upper subway will be well lighted and ventilated from the top, and will have wide sidewalks, or promenades, which will be covered, and will serve for the use of pedestrians during rain or snow. The portions of the streets of this upper subway, or covered street, which are not needed for railroad transit and other circulation may be converted into beautiful winter gardens and vast public halls. Unused portions of the lower subway may be used for the storage of material in connection with the various buildings, and for railroad material, and for implements and vehicles of all kinds used on the surface streets. Over the subways, in the form of continuous bridges, will be the streets proper. They will be great steel platforms, paved with brick and glass, with

fountains, flowers, and shrubbery in the centres. Only automobile vehicles with rubber-tired wheels, and bicycles, will be permitted on these streets.

No domestic animals other than dogs and cats will be allowed within the city limits, except in the public parks. Garbage will be removed in the subways. These conditions will render the streets of the city comparatively noiseless, and not only free from mud, dust, and dirt, but as clean as the floors of a house.

The houses proper will begin at the upper street surface ; all below will be used for dining-rooms, public rooms, basements for machinery, and storage rooms, and for all purposes for which space is necessary to meet the various needs of the vast buildings. These rooms will be basements only on the street side. On one side they will open upon great gardens, with walks, flowers, and shubbery, which will cover the space of the courts in the rear of the houses. These rear parks will be thirty feet lower than the fronts of the buildings, and will have sunlight and air. There will be no underground cellars. Cars will be run directly into the basements of all buildings intended for stores and distributing purposes, and they will be raised by elevators directly to the floors on which their freight is to

be discharged. Here special machinery and appliances will unload and store the goods. Ships will discharge their cargoes directly into great storehouses located on the docks, requiring no cartage for their freights. Commercial houses doing a wholesale business in bulky or heavy goods will sell from samples at houses situated, perhaps, at a distance from the docks, but the stocks of goods will be stored in, and orders filled from, great clearing-houses along the docks. Trucks, cars, and electric motors will run alongside and through these buildings, thus avoiding useless handling of goods, as well as all cartage. No engines or smoke will be allowed in the heart of the city. Required power will be obtained from electric motors, located on the outskirts of the city; if on the seashore, these motors will be worked by power obtained from the tides.

Each single apartment will be composed of three rooms, a bath-room, and a small kitchen. Each double apartment will consist of seven rooms, a bath-room, and a kitchen. If husband and wife have both acquired I. A. rights, they will be entitled to a seven-room apartment. Single rights will entitle the person holding them only to a three-room apartment.

A husband possessing I. A. rights may also

acquire I. A. rights by cash payment for a wife who does not possess them, and thus obtain the two I. A. benefits. A wife may do the same for a husband. An I. A. citizen cannot claim, keep, or close an apartment which he does not personally occupy. He acquires only the right to personal occupancy of an apartment for himself and for his immediate family during his life.

Couples, upon marrying, may obtain an I. A. insurance, in favor of possible orphaned children, by cash payment of such a sum as shall be found to be just. This I. A. insurance will entitle all of their children which may become orphaned of one or both parents, according to insurance taken, to a residence in an I. A. apartment, with all I. A. benefits and free educational facilities, until they become of age. If orphaned of both parents, they will be reared and educated in an I. A. home institution.

Or the couple contracting marital relations may obtain for a minimum sum an insurance in the civil government, guaranteeing the proper and kindly rearing and educating of possible orphans, in the State homes and schools. The choice of these insurances is optional, but the taking of the one or the other is obligatory upon parties contracting marital relations.

Water, light, heat, and power for elevator ser-

vice will be furnished from central stations at the expense of tenants. All further important improvements and better sanitation, as fast as such improvements come into general use, will be introduced into these houses. The revenues of the city, combined with the labor of its citizens, must suffice to keep the city always modern in its comforts and in its sanitary arrangement, without the incurring of any debt by the city and without expense to the I. A.

Each residence building will have, for the use of its occupants, one large central kitchen and dining-room or restaurant, located in the basement, where, if they wish, they may club together for the furnishing and serving of subsistence, which will be more economical for them, and will give better results than can be obtained by families singly.

Each family may, however, do its own cooking in its own apartments, if it so prefer. Servants will be obtained from oriental and inferior races. The apartments will be unfurnished, but a plain, comfortable, military or civil furnishing may be had from the I. A. at a low cost, for an equivalent service in time, or for its value in cash payment; nevertheless, occupants will be free to purchase and furnish at will.

The I. A. C. will be governed and its affairs

administered by I. A. officers, and it will be under army rule.

The city must be financially self-sustaining, except that it will not pay the salaries of the chief administrative officers ; these will belong to the permanent army and will be paid by the I. A. These officers will serve only as heads of departments.

The city will have no debt and no interest to pay, and its property will be free from direct assessments. A poll tax will take the place of general I. A. C. taxes.

The general free stores in the I. A. C. will be vast coöperative establishments similar in scope to the "army and navy stores" of London. The I. A. C. will own the buildings, which will be constructed especially for the ends these stores are to serve, and there will be no rent to pay. Their goods will be as varied as the world's choice affords, and they will be purchased in its cheapest markets, will be free of duty, and will be distributed, or sold, without profit further than necessary to cover expenses. Private stores may also be freely established.

The I. A. C. will own all real estate within its limits, and will make all alterations upon, and keep in repair, its buildings, apartments, and other property, at the citizens' expense.

All monopolies, including transportation lines, within the I. A. C. limits will be possessed and operated by the I. A. C. for its own benefit. Their services will be paid for by those using them. The I. A. C. will own and rent out for purposes of revenue its docks and public buildings for free stores, theatres, and other purposes not legitimately connected with the I. A. service. It will own and rent out factories with power, and own and lease land for factory sites and all other desirable purposes.

Its sources of public revenue will be large, and these revenues will be devoted to the running expenses of the city. If they prove insufficient to provide for these, levies of able-bodied occupants will be made for these purposes, or a poll tax will be substituted, and each citizen will be free to serve, or pay the poll tax, as he may prefer, for his share of the deficit.

Excess of revenue will be devoted to city improvements, or turned over to the I. A. treasury. The I. A. C. houses will be occupied only by those who have completed their I. A. service and acquired its full rights. A portion of the city land will be set aside in one quarter of the city to be leased for ground rent, for building purposes. Here any one may lease a plot of ground for ninety-nine years or less, subject to

re-valuation every ten years. Upon this plot the lessee may erect such a residence as he may choose, subject only to the agreed restrictions of the I. A.

Ground will also be reserved for manufacturing purposes, to be let on the above conditions. The I. A. may also build certain classes of residences to let to its foreign population. The I. A. citizens will not be idle ; they will engage in the usual commercial and manufacturing industries for individual profit ; they will organize vast private coöperative manufacturing and commercial institutions. All possible natural facilities for furthering their interests will be considered in the choice of location, and in the laying-out of the city.

These citizens will be men trained to activity in the widest sense. They will welcome ships and their cargoes from all climes, and they will send back their own ships laden with the products of our own land, and the I. A. C. will ultimately control the commerce and the finance of the world.

CHAPTER X.

INDUSTRIAL ARMY RURAL HOMES, FARMS, AND FARM LIFE.

THE location and sites for these houses, and the occupancy of them when built, must be subject to the conditions of, and to the approval of, the I. A.

The houses must be petitioned for, and, if the petition be accorded, the house, fitted and ready to put together, and all necessary material for its proper and thorough completion, will be delivered at a station on an I. A. transportation line most convenient to the site.

The material of these buildings will be structural steel and clay work. They will be practically fireproof, but may be finished in wood. The transportation of the house material from its delivery station to the building site, and its erection and completion when there, will be effected by the citizen at his own expense, under the supervision of an I. A. inspector, and subject to his approval.

Neighbors will undoubtedly club together, as

of old, to aid a comrade to erect his dwelling. Thus its erection need be no hardship, but should be rather the occasion for a joyful demonstration of kindness.

The sites and plots of ground for these rural homes, if they do not belong to the I. A., must be donated to it by the citizen asking for the house, before the demand for the buildings is accorded. All I. A. buildings must be on I. A. grounds.

These sites must be healthful and of sufficient size to give space for a good vegetable garden, and for flowers, shade trees, walks, and lawns.

The single house, representing one I. A. right, will consist of three rooms and kitchen, the same as in the I. A. C. The double house, representing two I. A. rights, intended for husband and wife where both have acquired these rights, will have seven rooms and a kitchen. A husband may acquire, by payment, I. A. rights for a wife who has not acquired them. A wife may do the same for a husband. Most women who are physically able will acquire I. A. rights for themselves by either work or cash payment, before marriage.

I. A. houses, both rural and city, will be fitted with all modern appliances for sanitation, heating, and comfort, and these will be changed as

fast as better devices appear and are generally approved. The occupant must aid in these changes.

I. A. citizens in different sections of the country and in different cities may exchange I. A. residences with each other, or exchange for vacant houses elsewhere, at will, by conforming to prescribed I. A. regulations. This will change present centres of population, and tend to its concentration where conditions are most favorable, permitting the individual to follow his interests wherever they lead.

The I. A. will not be bound to furnish residences in localities of which it does not approve, or when it has a sufficiency elsewhere, or to furnish new dwellings in localities where others are vacant, except on favorable conditions of its own making, among which would be a stipulation that the petitioner bear an approved extra part of the expense. The I. A. may rent to private parties, for other purposes, buildings and residences which are no longer useful to itself.

The architecture of these rural homes will be adapted to their purpose and surroundings. The distribution of the rooms will be such as to best fulfil desired ends. Each occupant will be required to keep his house in good repair and in good condition, and well insured for the benefit

of the I. A., and the grounds in good order; shrubbery and shade trees must be grown and protected, all of which the occupant must do at his own expense, and subject to the approval of the I. A. inspector.

The tenant may make additions to, and alterations in, these houses to suit his particular needs, subject to the approval of the I. A. inspectors.

The I. A. will have plans prepared in advance, and material fitted and constantly ready for varied extensions and additions, in harmony with the buildings. This material will be furnished at cost to the I. A. citizen who may wish to purchase and so use it.

The building and its lot, with all additions and improvements which the occupant may make at his own expense, and which he may use during his natural life, will belong to and remain the full property of the I. A., without further compensation to the occupant. For the further use of such improved buildings the I. A. will charge other occupants a reasonable sum in extra service or cash payment.

In the production of material for the I. A. city and rural and farm homes, the enormous duplication of the structural steel frame works and other building materials would utilize all the

advantages of special automatic machinery and improved processes in their production, which would result in greatly diminished cost of fitted and finished building material, and of complete constructions.

Both I. A. C. and rural buildings will be fire-proof, and will be built as nearly indestructible, and as free from the necessity of all future repairs, as possible. They will be intended to serve the interests, not only of the present, but of many future generations of occupants.

This system of rural homes will permit farmers to organize into village communities. The farms will be outlying from the villages in every direction. The village community will give to the inhabitants the advantages of social and club life, such as libraries, schools, lectures, churches, stores, laundries, bakeries, and creameries ; in fact, it will offer all the advantages of a coöperative social body, with division of labor. Especially will this be facilitated where the farm lands are owned by the State, and can be properly parcelled out for leasing to the village occupants.

The advantages to the farmer in the way of leisure, and his opportunities for intellectual pursuits, will be equal to those enjoyed by the majority of those engaged in other occupations.

His occupation will be more healthful and not more laborious than other industries.

The farmer who has served in the I. A. will be well educated and scientific in his methods. He will have a good knowledge of the agricultural, physical, natural, and chemical sciences, and of the laws of coöperation and commercial value. He will press into his service waterfalls, the sun, the winds, and electricity. They will perform the drudgery and wearisome labor of his household, and plough and reap at his bidding. The powers of windmills and waterfalls, and, where these are lacking, of great sun engines, provided with storage batteries, will furnish electricity, which will be carried by wire to any part of the far-distant farms where it is needed.

The State will build the carriage roads, using the materials and methods of construction best adapted to modern wants. On demand of a county for a new road of an approved type, the State, in conjunction with the county, will assume the building of it, the State paying half the cost. These roads will be smoothly macadamized and of easy grades. Trains, carriages, and bicycles, all automobile, will pass over them everywhere. Trolley wires for power may be established for the use of all vehicles, if desired.

These vehicles will carry mails, passengers, and the produce of the farms, keeping up the intercourse between villages, and keeping the farmer in touch with the markets and with his fellow-men. There need be no expense for private carriages drawn by animals, no loss of time in the employment of them.

CHAPTER XI.

PRELIMINARY STEPS TO THE ORGANIZING OF THE INDUSTRIAL ARMY.

THE organization of the I. A. would require, first, the necessary legislative enactments, and then the appointment, by the President, of a commission of officers. This commission would be composed of the ablest scientists, financiers, economists, sociologists, and practical business men of the country. These men would consult with other able men; they would ascertain upon what basis a prudent, safe, and prosperous initiation of the vast I. A. organization could be made, and would decide upon plans of action, and prepare estimates of the funds necessary annually for their execution, and of the number of years during which such aid would be required. The plans of the commission would comprehend no more than could be safely carried out within prescribed limits of cost and time, and made profitable from the completion of plants.

Then an annual appropriation for the esti-

mated amount, and for the time fixed, would have to be made by the government. The further necessary officers for the army would then be commissioned.

From the beginning, so organized, the I. A. would work out its own full success without further aid from the State, except for the purchase of necessary land and of such useful natural monopolies as it could not create to better advantage.

The natural monopolies and the land purchased might be so managed by the I. A. as to pay back to the State their cost, or a part of it, if this should be deemed advisable.

The acquiring of titles to land by the United States and by municipalities, other than those most necessary for the use of the I. A., would have to be accomplished slowly, and with great wisdom, in order to safely provide for their payment. No price paid by the State for property should exceed its actual value, or that which the probable annuities accruing from rentals would safely warrant.

Volunteers of enlisting age for the I. A. service would first be called for in such numbers as could be usefully employed during the early stages of the organization.

When the organization should become suffi-

ciently perfected, and be in profitable working order in all its branches, a call would be made for the full force of citizens, which the law would authorize. Then, as fast as further men could be lucratively employed, volunteers of all ages over the enlisting age would be called for, who would be capable of, and willing to give, valuable prolonged or life services for I. A. benefits.

The I. A. City and rural homes could thus be speedily built.

The cost of organizing and equipping a good working contingent of the I. A. from which the whole force might be speedily and profitably employed would be less than the cost of a war with England. It would be less than the vast sum which the folly of silver legislation for the benefit of mine owners has cost the country during the silver and fiat-money panic of 1893 and later. Or an amount equal to that now disbursed annually for pensions, which in 1895 was \$140,959,361, would, if granted in favor of the I. A. and continued for a term of ten years, place it upon a well-developed and solid financial working basis.

This would not include the purchase of all lands and all useful existing natural monopolies, but it would include the construction and equipment of a good working contingent of manu-

facturing plants, and the construction of the most useful lines of railroads and telegraphs, and the acquiring of the most necessary land and monopolies, in conjunction with the present public domain.

From a good beginning the I. A. could build or acquire all further useful transportation lines through its own efforts. The I. A. organization is for the equal benefit of all. It can antagonize no just interests. The rich man of to-day may be the poor man of to-morrow. All creeds, dogmas, and beliefs, all political parties, all classes of wealth and poverty, can with equal personal interest unite upon its common platform. It should receive the support of all, regardless of difference of opinion upon other matters, for it will work good for all and injustice to none.

“ This moment’s a flower too fair and brief

To be wither’d and stained by the dust of the schools.
Your glass may be purple, and mine may be blue,
But while they are filled from the same bright bowl,
The fool, that would quarrel for difference of hue,
Deserves not the comfort they shed o’er the soul.

“ Shall I ask the brave soldier who fights by my side
In the cause of mankind, if our creeds agree ?
Shall I give up the friend I have valued and tried,
If he kneel not before the same altar with me ?

From the heretic girl of my soul should I fly,
To seek somewhere else a more orthodox kiss?
No, perish the hearts, and the laws that try
Truth, valor, or love by a standard like this." *

* Thomas Moore.

CHAPTER XII.

EXCESS OF POPULATION. NATURALIZATION OF FOREIGNERS.

PRUDENTIAL and successful restraints upon the increase of population are indispensable to the full success of the I. A. organization in its widest sense. The advantages of life to the masses are not now such as to make an increase of population morally obligatory, or a wise, desirable, and moral end to be achieved.

To make an increase desirable and morally warranted, a stronger physical and mental condition, and a greater material happiness, should be assured to such increase. Conduct leading to an increase under other conditions would be criminally wrong to posterity.

Marital contracts should not be permitted until the contracting parties are able to give reasonable assurance of conferring a good material condition, and good physical, mental, and moral health upon possible progeny.

A population should not exceed the number necessary to give the most advantageous devel-

opment to the natural and artificial resources which contribute to its happiness—that is, the number necessary to yield a maximum of all desirable results for a minimum of effort.

The present population of the United States is sufficient to attain these ends. An increase of population beyond this number would cause a stationary condition, or a decrease in the relative sum total of benefits existing and produced, and in the consequent happiness enjoyed.

It would be wise and moral if the numbers brought to maturity, of each coming generation, should simply equal those of its predecessor, so that a constant increase of mental, physical, and material happiness might be attained.

All just prudential and moral restraints should be brought to bear to restrict the unjust increase of population. The employment of physiological preventives, not incompatible with justice, morality, and hygiene, should form a necessary and compulsory part of all marital education. A larger family than parents can properly and comfortably rear and educate should be a cause for severe condemnation and ostracism of such parents, and not a motive of sympathy as at present.

As men reach a higher intellectual development, fecundity decreases, and the growth of

population becomes slower. The problem of restricting the increase of population has been elsewhere rightly solved. In France to-day just and proper prudential, and desirable moral restraints suffice to keep the population nearly stationary, and the successful aim of parents is to have no more children than they can leave in material and social positions equal or superior to their own.

A stationary condition of population does not imply a stationary state of wealth, or of human improvement. With this condition there would remain a greater scope for mental culture, and for moral and social progress, and for improving the science of right living.

“There is room in the world, no doubt, and even in old countries, for a great increase of population, supposing the arts of life to go on improving, and capital to increase. But, even if innocuous, I confess I see very little reason for desiring it.

“The density of population necessary to enable mankind to obtain, in the greatest degree, all the advantages both of coöperation and of social intercourse, has, in all the most populous countries, been attained. A population may be too crowded, though all be amply supplied with food and raiment. It is not good for man to be kept

perforce at all times in the presence of his species. A world from which solitude is extirpated is a very poor ideal.

“Solitude, in the sense of being often alone, is essential to any depth of meditation or of character ; and solitude in the presence of natural beauty and grandeur is the cradle of thoughts and aspirations which are not only good for the individual, but which society could ill do without. Nor is there much satisfaction in contemplating the world with nothing left to the spontaneous activity of nature ; with every rood of land brought into cultivation which is capable of growing food for human beings ; every flowery waste or natural pasture ploughed up ; all quadrupeds or birds which are not domesticated for man’s use exterminated as his rivals for food ; every hedge-row or superfluous tree rooted out, and scarcely a place left where a wild shrub or flower could grow without being eradicated as a weed in the name of improved agriculture.

“If the earth must lose that great portion of its pleasantness which it owes to things that the unlimited increase of wealth and population would extirpate from it, for the mere purpose of enabling it to support a larger, but not a better or a happier, population, I sincerely hope, for the sake of posterity, that they will be content

to be stationary long before necessity compels them to it." *

The naturalization of foreigners born abroad should cease. Among the conditions required of candidates for naturalization should be the following : Birth in the United States and education in its public schools, including passage of an examination in the graduating department of the highest public school in the county where educated. The case of each candidate fulfilling these conditions should be voted upon separately by the authorities of the county where the application is made. Foreigners should not be permitted to enter the I. A. or to receive its benefits, or to possess real estate or natural monopolies in the United States. They should possess equal rights with the citizens of the United States to personal freedom, to protection, and to the exercise of other industrial activities. Equity and justice should prevail with regard to all.

* John Stuart Mill : " Principles of Political Economy," p. 454.

CHAPTER XIII.

GENERAL CONSIDERATIONS CONCERNING THE INDUSTRIAL ARMY.

THE I. A. will not receive material benefits from the State, except aid for its installation. It will not impose or collect any tax for its own continuance.

It is not a State Socialistic organization. Its beneficiaries will receive only the full benefits accruing from their own labors, and these annual benefits, be they more or less, must suffice for each year's distribution. No one will be taxed for the benefit of another. It will exercise no compulsion except that of compelling the individual to provide for his own material necessities, and it will furnish the opportunities for so doing to those who lack the means. The I. A. can furnish, subject to its conditions, food, shelter, and raiment at all points in the United States with equal facility, which will give to the citizen choice of location, and ability to follow when and where interest may lead.

This will constitute locative freedom, and it will concentrate opportunity and talent.

It removes natural monopolies and the natural media from the operations of private ownership and trusts, and restores them to their rightful owners, the people. These are essential to the welfare of all the people, and cannot go to build private fortunes without wrong to the masses. Trusts are good, but their operations should be excluded from the fields of the people's common rights.

Wealth and colossal wealth may be amassed by other means than the appropriating of the unearned increment of profits accruing from natural monopolies, the common heritage of all. It will continue to be amassed by methods constantly open to all, which will bring oppression to none, and it will consist of that the private possession of which infringes the rights of none. Private wealth is good, colossal individual wealth is good, and the acquisition of rightful wealth by just means should be encouraged and facilitated.

The I. A. recognizes the fact that most men are able and willing to add to suitable opportunities a valuable increment in labor when it accrues to their own benefit.

It directs the efforts of citizens into proper channels, and furnishes them with opportunities

for utilizing their labor, and for acquiring the essentials of their own material happiness.

With a view that the citizen may profit by his own labor, food products will be furnished uncooked ; materials for houses will be hauled and put together by the future occupant ; cloths and materials for necessary clothing, such as underwear, white goods, dress goods, furnishing goods, and the materials of outer garments, will be furnished to be made up by the future wearer, but their equivalents in ready-made goods may be furnished at the option of the citizen.

Salt fish, condensed milk, salted butter, cheese, good meats, flour, meal, canned provisions, and all necessary groceries of a non-perishable nature will be furnished by the I. A.; but it will not undertake to furnish a full and varied subsistence in table delicacies, or in luxuries, or in extra-perishable foods. For instance, it will not furnish fresh milk, fresh butter, eggs, poultry, oysters, fresh fish, and delicate garden truck. The citizen in the rural districts will have an agricultural plot in connection with his residence, to which he may add his labor to raise garden vegetables, and produce in part, or in whole, the more delicate articles of his consumption.

All citizens must obtain such articles by their

own efforts. This will diminish to the I. A. the cost and risk of furnishing perishable subsistence.

The I. A. will not furnish its benefits to the whole population. It will furnish them only as equivalents for services rendered. Parents must rear and provide for their own children, and must provide an insurance fund for possible orphans.

The acquiring of I. A. benefits by women will be of vast importance to them. It will be their economic enfranchisement, conferring upon them good homes and material freedom. The freedom of women to marry, or to remain single, need no longer be necessarily conditioned by material considerations.

The I. A. creates broad and equal opportunities for all. and equips men to embrace them. It creates economic and locative freedom. It recognizes the fact "that economic and industrial opportunities underlie all other opportunities. They are the foundations to social success." *

On leaving the I. A. service, the citizen will have acquired a material position at the age of twenty-five or twenty-seven for which most men struggle, often hopelessly, until middle life, and

* Carroll D. Wright.

to which many never attain. Youth will still be his, and there will yet remain for him wealth to be acquired, and all higher ambitions to be satisfied. He will have the equipment for their pursuit, and there remain all the incentives these may offer.

The conditions of the I. A. do not controvert the principles of free industry, nor those of the freedom of the individual.

The expiration of its limited service and schooling leaves the individual untrammelled.

I. A. obligations imply equivalents received, or to be received. Parents have a right to the services of children in return for fulfilled parental obligations. So, if the State is under obligations to assist its needy, its helpless, and its indigent aged citizens, it has a right to the limited services of its citizens, the equivalent of the guarantee it gives to furnish aid to them in case of need, or through the I. A. to cause the citizen to guarantee himself against falling in need and becoming a possible public burden.

The citizens willingly delegate to the State, through legislative enactments, the direction of their united efforts, for a limited specified time, and for a specified purpose: the acquiring of economic and locative freedom. When this guarantee is furnished, and economic and loca-

tive freedom acquired through the I. A., the citizen receives back the prerogatives he delegated to the State. He assumes and becomes possessed of all his rights to personal freedom and to free industry.

The civil government will confer legal personal freedom and education; the I. A. will confer economic and locative freedom; and these three give equality of opportunity.

It may be urged that this vast body of trained men, under a military organization, might become a danger to the State. But it must be remembered that, opposed to this army, would be the regular United States militant army, with power to call into its ranks all able-bodied I. A. men above the age of twenty-seven, men equally well trained, who would wish their acquired rights to be continued and whose interest would lie with the regular government.

Property of the I. A., including its monopolies, will be free from direct assessments. The interest of each normal citizen in its property will be equal to that of every other normal citizen. Therefore, each I. A. citizen will pay a poll tax of five dollars, more or less, per annum, as may be found to suffice, in lieu of State and local special taxes on his or her I. A. interests. Private property will continue to be taxed by

the civil authorities, and all matters of civil public concern within the province of just government, including schools, will be supported and controlled by the civil authorities. The I. A. *régime* of simple, honest, free trade industrialism will necessitate general free trade. All revenues will be derived from national properties and from direct taxation, eliminating present complicated, costly, and wasteful systems of collection and their attendant frauds, which have suppressed personal liberty and freedom of commerce and oppressed the many for the benefit of the few. The present system of wasteful chaotic competition between individuals and firms has evolved adulterations in all that we eat, drink, or wear. The I. A. goods will be of known purity, and its labels will indicate the nature of the materials of which they are composed, so that its products will be in active commercial demand. Fraudulent practices and misrepresentations will not enter into its methods and transactions; and material gains based upon these will not be countenanced.

Its methods, processes, and products will be open books, that all the world may read and that a child may trust. Justice, honor, and truth will characterize all its activities.

The mental and moral effect of the I. A. ser-

vice and training upon the individual will be to evolve in him a high standard of personal morality and justice, in harmony with I. A. environments. Intrigues, deceptions, injustice, and criminality, born of militant industrial competition, and of the despair of non-success and desolate want, will cease to exist.

The I. A. will give to each citizen the practical applied training necessary to fit him, if possible, to successfully engage in the most highly evolved forms of industrialism and co-operation.

The I. A. will suppress the waste of competition. For planless production it will substitute systematic and increased production. It will reduce to a minimum the elements of chance, and thus eliminate the waste of mistaken enterprises. It will prevent the injustice of private absorption of unearned increments of increased value of public properties. It will eliminate from its operations crises and industrial depressions, and their consequent enormous wastes and attendant want and suffering. It will promote the full utilization of useful inventions and of the best industrial methods. It will eliminate the needless from all its economic operations, and will aim to produce with the smallest expenditure of economic energy. It will substitute a rational system of

exchange and distribution for the actual costly, wasteful, and disorganized system. It will eliminate material want and poverty, which are the principal causes of demoralization and crime.

It will confer upon the people the potentialities of all further improvement. It will elevate the national standard of honor, and will evolve a higher national morality ; substituting honesty and justice in dealing for the falsifications, deceptions, and misrepresentations of the actual system of industrialism.

The tendency of the times is irresistibly toward the organization of a gigantic railway trust of never-equalled capital and power. Shall it be a public trust for the equal benefit of all, and working harm to none? Or shall it be a private trust for the benefit of the few, at the expense of all, and which may oppress the many? A vast railway trust, which should include all lines in the United States and place them under one management, would permit of great economy in their operations, and would probably place them all upon a paying basis.

It would stop the stupendous waste of needless paralleling of lines ; it would eliminate the running of needless trains and useless costly competition. It would eliminate the unnecessary from all their operations. But it would

tend, as in present trusts, to pour the enormous accruing benefits and unearned increments into the hands of the few. Such a trust, under private management, would work crushing injustice, and it would be a dangerous, if not a fatal, menace to the economic liberty and the material interests of the people.

Under the I. A. management its benefits would accrue justly to all, and it would do wrong to none.

The I. A. *régime* will tend to equalize locative freedom and the possession of necessary economic benefits, and it will tend to the acquiring of further and greater material wealth by the mass of the people. With the removing of natural monopolies from the field of individual ownership, with individual economic welfare and freedom of movement secured, and with essential material benefits held in trust by the I. A., and a great surplus of wealth secured in individual accumulations, a larger proportionate share of private energy and wealth will tend to be devoted to the satisfaction of æsthetic demands, and more wealth than ever before will be invested in the art gallery, the palace, the yacht, the essentials of music and of letters, and in the intelligent travel which prepares the individual for the higher enjoyment of all these.

This new world should result in a general economic welfare and æsthetic culture and development which in breadth and depth should far exceed that of ancient Greece, and it should make for a higher civilization than any of which the world has ever dreamed.

CHAPTER XIV.

MONEY AND BANKING. QUALITIES DESIRABLE IN MONEY. ITS BEST MATERIAL AND FORM.

To the success of the Industrial Army it is necessary that its money should be the best, and that sound financial conditions should prevail.

The following are some of the qualifications that money of the best material and best form should possess : high specific value in proportion to weight ; transportability ; durability ; extreme divisibility without loss of value ; indestructibility ; malleability ; equality of value in widely separated countries and places ; homogeneity, making any gram or grain as valuable as any other gram or grain ; desirability and acceptability as money by all commercial nations ; stability of value.

Gold best fulfils these conditions.

The form of metal coins for money has been adopted by the civilized commercial world. The material of coin should possess intrinsic value equal to its full face, or coin value. Its material should possess the same value over the whole

commercial world, whether as bullion or coin—that is, its value should be intrinsic, and should not depend upon the stamp on its face or on the financial credit of a government. (In international trade, the precious metals pass by weight, whether coined or not.) Only gold best fulfils these conditions.

Trade has become international and world-wide, with established centres. It has evolved the necessity of a world-wide common uniform standard of value, to serve as a measure of its exchange values.

Good money is only that which is competent to serve all the purposes of money throughout the commercial area, “and is available to settle balances at any money centre throughout the entire area within which exchanges are focused on that centre.” This area may be world-wide.

Only gold meets these requirements. Any other money can serve only for a local circulation, and places the citizen using it at a material disadvantage in his exchanges with other people.

The principal civilized nations of the world have made their monetary unit of gold.

Gold alone settles balances in London, which is the focus of the world's exchanges, and is the world's clearing-house. It is folly for any com-

mercial nation to oppose the laws of commerce and of exchange.

"No particular nation can have a medium of its own, apart from other nations, for settling international balances, without accepting commercial inferiority and comparative isolation."

Commercial equality demands that each civilized nation shall conform to the general practice of all. This principal asserts itself in communities, nations, and aggregates of nations.

Finance rules the commercial world; London is the centre of its exchanges, gold is its measure of values. Its measure of values must measure and control values over the whole international commercial world. A commercial nation must accept its measure of values, or take a subordinate position and place its own material interest at a disadvantage. Neither paper nor silver money fulfil the foregoing conditions, and they do not constitute good money.

Paper money, unless it be in the nature of a gold certificate of deposit, is fiat money, and cannot be relied upon to fulfil the requirements of good money.

Our country has but recently passed through a panic, caused by fiat silver and paper money, which has cost the people thousands of millions

of dollars, and more than the installation of the whole Industrial Army would cost.

National bank-bills, greenbacks, government notes, etc., are fiat money to the extent that their face value exceeds the amount of gold held in vaults on deposit for the sole purpose of their redemption and payable on demand. Paper promises to pay gold on demand, in the nature of gold certificates of deposit, or bank-bills, can serve only to a limited extent as a substitute for good money, and only when the full amount of gold the promise calls for is held in reserve for the specific, immediate, and sole purpose of redeeming the promise to pay upon demand.

To serve in a limited way as worthy substitutes for good money, these various promises must be redeemable in gold without expense to bearer in the places where they are wanted to settle balances. In other words, only gold can fulfil all the offices of good money in a wide sense.

Next to good money, credit and its instruments, based upon good money, render the greatest services to economic activities. Credit and the instruments of credit are book credits, checks, drafts, bills of exchange, bills of lading, promissory notes, various documents and written evidences of transactions, and commercial paper in its various forms.

These substitutes for money, when based upon a good money standard, serve its ends to a large extent for given fixed purposes, often to the extent of ninety-five per cent. The value and circulating power of these instruments of credit depend upon their individual merits. Necessary elements of their worth are value of collateral, confidence, good faith, and a general and prompt enforcement of equity and justice.

Dealing in national and commercial credits and their instruments is the province of brokers, banks, and clearing-houses.

It is not inflation, nor a large *per capita* circulation, which makes so-called cheap money. It is a good money basis ; it is perfection of methods of clearance and exchange ; it is confidence in trade and in the industrial situation ; it is faith in the solvency and integrity of the borrower. Attempts to lower the rate of interest by artificial means can but destroy confidence and tend to the annihilation of trade and industry.

The United States government, with a gold reserve of often less than \$100,000,000, now has about \$600,000,000 in paper currency, for the cancelling of any part of which it has made no provision. This currency to a large extent is fiat money.

Its value depends principally upon the credit

of the government and the good faith of political parties.

The United States has, further, nearly 500,000,000 silver dollars, which are fiat money to the extent that their face value exceeds their value as bullion. Neither its paper nor its silver money is good money. They cannot fulfil all the functions that good money is required to fulfil.

How can they be replaced by good money ?

The United States should sell in the markets of Europe, at such time and in such manner as sound finance may dictate, long-time gold bonds at low rates of interest, to the extent of \$600,000,000, or to the extent of its present paper issue. With this gold so acquired it should call in, redeem, and destroy its whole paper issue, except its gold certificates of deposit, leaving the gold in its place.

Banks should no longer be banks of issue. It should not be the function of banks to create or issue money. They should deal in credits and their varied commercial instruments.

National banks should be authorized to deposit gold in any United States sub-treasury to any amount, against which they should receive gold certificates of deposit, but only for the sum deposited, in denominations ranging in conven-

ient multiples from one to five hundred dollars. These certificates should be of convenient shape for circulation. The gold, to the full extent of their face value, should be held by the United States treasury for the sole purpose of redeeming these certificates upon presentation at any United States sub-treasury.

All certificates should be destroyed upon redemption. No certificate should be twice issued.

On demand of a national bank only, registered gold certificates should be issued from any sub-treasury, against deposits, payable to order of any other specified sub-treasury in the United States.

All banks receiving deposits subject to check should honor special checks at par through suitable agencies, in any and all of the principal commercial centres of the United States, a particular place to be specified at the option of the drawer. These obligatory centres should be specified by the Secretary of the Treasury. Such centres should be New York, Boston, Philadelphia, Chicago, St. Louis, New Orleans, San Francisco, and others. The United States should have sub-treasury branches in all such centres. Banks would be able to settle their clearing-house balances in these different centres without expense of exchange to themselves

by the use of United States sub-treasury gold certificates of deposit, obtainable in their own city and payable to order in any specified city mentioned. The United States sub-treasuries would thus settle final trade-centre balances.

The silver held or issued by the United States government, both in coin and in bullion, other than the amount useful for subsidiary coinage, should, as fast as good finance dictates, be sold for gold in Europe, at market rates, and the proceeds applied to the redemption of the silver certificates—the deficiency for such redemption to be made good by the United States Treasury, or the surplus to be devoted to the payment of the public debt.

The following quotations on silver are taken from “A Century Onward,” by the present author :

“ All payments are due in gold, unless otherwise specified. Simple equity settled that a century back. We coined and made silver free, and the acceptance or refusal of it free, and the question was never revived.

“ In principle, those who wished to do so had a right to use silver for money, or to use cows, copper, iron, wheat, or other commodities for money, wherever they could get other people to knowingly and willingly accept them as such.

In principle, those who did not wish to accept silver or these commodities as money could not be made to do so.

“The injustice proposed by the owners of silver mines was that other people (the government) should be made to guarantee the price of their products (silver), and these other people forced to accept them as money, and that these other people should be forced to make good all depreciation in the price of these silver men’s products.

“The farmer had an equal right to demand that other people (the government and the silver men) should be made to guarantee the price of his cows, or the price of his products (wheat, corn, oats, etc.), and forced to accept them as money, and make good their depreciation in price.

“Men are free to mine and use silver, or to produce and use agricultural products, as they will. Other men are now free to refuse or accept them, as they will.

“After all, the silver men and the farmers, if they made these demands, had good reasons for so doing, because they were not asking for different or higher subsidies than those the government had accorded to manufacturers and other producers (tin-mine owners and sugar

trusts, for instance), in the shape of unjust tariff regulations, and which subsidies the silver men and the farmers were obliged to pay, while getting no subsidies for the most of their own products.

“If manufacturers and sugar-raisers were protected, and if American tin was protected from the pauper tin of Europe, so should silver have been protected from the influx of insidious European gold, and the farmer’s wheat and the planter’s cotton should have been subsidized.”

To facilitate international trade, exchange, and travel, the gold coins of all civilized nations should have the number of grains or grams of pure gold they contain stamped upon one side prominently and legibly. This would necessitate no change in the coinage of any nation, except the addition of an inscription, thus: the dollar contains 23.22 grains pure gold, and would be so stamped; the pound sterling contains 113.001 grains, and would be so stamped; the five-mark piece, 27.656 grains; the five-franc piece, 22.401 grains; the fifteen-rupee piece, 165 grains; all reduced to pure gold.

The money of international commerce should consist of simple coined grains, or grams, of pure gold, of indicated weight, and international accounts should be kept in this standard. Each

nation may continue to put its own familiar coin stamp on the reverse side of the coins. All bills of exchange and letters of credit should call for grains, or grams, of pure gold. The necessary alloy would not count in its weight.

This would constitute one common universal good money standard, familiar to all the world. It would greatly facilitate international commerce, and it would obviate most of the expense and annoyance of exchange. The fineness of the coins of the principal commercial nations is now from 900 to 916. It ought not to be difficult to conclude an international agreement for a common standard of fineness, but it would not be absolutely necessary to do so if the present coins should be made to bear the indication in grams, or grains, of the weight of pure gold which they contain.

CHAPTER XV.

AN ENDOWED PRESS.

THE power of the press is great. The wealth employed in vast modern enterprises commands special, specious, and wrongful press pleadings.

Truth is publicly perverted to gain unjust private ends.

Special and powerful press organs have been created or subsidized by great moneyed interests, and devoted to the defence of injustice.

Through the power of gold, error is successfully and persistently presented under the garb of truth, until its very hoariness commands respect.

The truths of political, economic, financial, sociological, and physical science are perverted to national hurt through incapacity, ignorance, and greed.

"Fifteen per cent. of the laws on the statute-books of the States of the Union stand there in defiance of acknowledged laws of social and economic science," and are working harm to the social body.

Party politics and party measures are championed regardless of merits, and national political immorality is rife. National interests; national honor and morality; the national standard of equal liberty and of equal justice for all; the truths of political, economic, financial, sociological, and physical science; the interests of the masses; the rights of the feeble, of the wronged, and of the crushed—all demand and should have an equally powerful press, which should be guided by truth, knowledge, honor, and justice, and which should boldly carry these standards so high that all the world may see and know them, and that ignorance, wrong, and injustice would hide abashed.

Such a press organ should be established and maintained by liberal endowments.

The following quotation on "An Endowed Press" is taken and revised from a volume by the present author, entitled "A Century Onward": "A powerful modern feature in the higher education of the people, and for their moral, political, and practical guidance, is the ENDOWED FREE PRESS. It is a great independent daily paper, with an endowment of ten millions of dollars, unconditioned by party politics, theological reservations, moneyed interests, injustice, inefficiency, or want of knowl-

edge. It is a bright beacon light, showing the way amid the storm and heat of party strifes ; a safe guide from the shoals and breakers of prejudice, ignorance, and crafty interest ; a leader of the people toward a higher civilization. It is found in the clubs, reading-rooms, and libraries throughout the land. The paper was founded and handsomely endowed, about a century back, by the Furburs, Armours, and Fields, of Chicago—familiar names of its great philanthropists. The original endowments were rapidly increased by gifts and bequests from all sections of the country, coming from men convinced of the great importance of the work. Its subscription price is not higher than that of other dailies. It employs on its staff the ablest scientists and philosophers of the age, gathered from all parts of the civilized world, combining the wisdom of all branches of science ; men unconditioned by incapacity, ignorance, errors, and prejudices—unconditioned by the restrictions of party or moneyed interests ; men who know the truth, and who follow it wherever it may lead. Questions of political economy, of finance, of ethics, of sociology, and of State, national, and political interest, and the varied important questions of the times, are treated from the broadest standpoint of scientific truth and fundamental principle, on which the interests

and happiness of humanity are founded. The delineation of the qualities of good leaders, by a certain speaker, are applicable to the management of this press. We must have, for the management of such a press, "men with the courage of their convictions, and only the rightly educated man has any real convictions. We must have men who know there is a right to every question as well as many wrongs; we must have men who know what that right is, or who, not knowing, know how the right may be found. Every question of public policy is a question of right and wrong. To such questions all matters of party ascendancy, all matters of individual advancement, must yield precedence." The power of such a press, as a promoter of a higher education, a higher civilization, and a higher national morality, and as an expounder of political, physical, economic, and sociological truths, would be greater than that of any single university in the land.



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